

THE 4<sup>TH</sup> ANNUAL INDOOR GROW ISSUE

HIGH TIMES

# HIGH TIMES



SEPTEMBER 1989

\$3.95



## GROWING WITH ROCKWOOL

by Jorge Cervantes

**THE 1989 CANNABIS CUP AWARDS! • LIGHT INTENSITY: HOW MUCH IS ENOUGH? • BUILDING THE INDOOR ORGANIC VEGETABLE GARDEN • DO-IT-YOURSELF SEEDLING NURSERY • HOW TO GROW MAGIC MUSHROOMS • STEPS TO LEGALIZATION**





We're celebrating our 10th Anniversary  
with a 5% discount on all items.  
Plus a 5 year warranty on all  
lighting systems.

(One year warranty on bulbs.)

## ENERGY EFFICIENT GROW LIGHTS

### METAL HALIDE—(balanced growing spectrum)

All systems include assembled ballast, bulb, reflector, 15' lamp cord & 8' power cord.

- ★ 1000 watt DELUXE—Your choice of one of four great reflectors:  
46" Polished aluminum super reflective hood (white available on request). □ Our new 20" low profile (only 7" high) horizontal reflector with a space-age polished aluminum reflective panel (puts out 45% more light than conventional reflectors). □ 48" parabolic, high output reflective hood. □ 20" adjustable white enamel reflector.  
Each deluxe unit comes with a super quiet ventilated ballast box with a high quality 6-outlet power supply with a lighted on/off switch and a 15 amp circuit breaker. System includes a 110,000 lumen-12,000 hr. bulb ..... \$184.50  
To upgrade to our 125,000 lumen-12,000 hr. Horticultural Superbulb ..... Add \$15.00
- ★ 1000 watt STANDARD—18" high temp. white enamel reflector. Ventilated ballast box. System includes a 110,000 lumen-12,000 hr. bulb ..... \$167.50  
To upgrade to our 125,000 lumen-12,000 hr. Horticultural Superbulb ..... Add \$15.00
- ★ 1000 watt ECONOMY—2'x3' polished aluminum reflective hood (not shown). Assembled open ballast. System includes a 110,000 lumen-12,000 hr. bulb ..... \$144.50  
To upgrade to our 125,000 lumen-12,000 hr. Horticultural Superbulb ..... Add \$15.00
- ★ 400 watt DELUXE—14" high temp. white enamel reflector. Ventilated ballast box with a high quality 6-outlet power supply with a lighted on/off switch and a 15 amp circuit breaker. System includes a 34,000 lumen-20,000 hr. bulb ..... \$134.50  
To upgrade to our 40,000 lumen-20,000 hr. Horticultural Superbulb ..... Add \$10.00
- ★ 400 watt STANDARD—14" high temp. white enamel reflector. Ventilated ballast box. System includes a 34,000 lumen-20,000 hr. bulb ..... \$124.50  
To upgrade to our 40,000 lumen-20,000 hr. Horticultural Superbulb ..... Add \$10.00
- ★ 400 watt ECONOMY—2'x3' polished aluminum reflective hood (not shown). Assembled open ballast. System includes a 34,000 lumen-20,000 hr. bulb ..... \$109.50  
To upgrade to our 40,000 lumen-20,000 hr. Horticultural Superbulb ..... Add \$10.00
- ★ 175 watt MINI-MIGHT METAL HALIDE—15" reflector with self-contained ballast. 15,000 lumen-20,000 hr. bulb (only 18c/day to operate) ..... \$99.00

### HIGH PRESSURE SODIUM—(red orange spectrum)

Completely assembled. All systems include a covered ventilated ballast, bulb, reflector, 15' lamp cord and 8' power cord.

- ★ 1000 watt DELUXE—Your choice of one of four great reflectors (5 KV pulse rated socket included): □ —46" Polished aluminum super reflective hood (white available on request) □ —Our new 20" low profile (only 7" high) horizontal reflector with a space-age polished aluminum reflective panel (puts out 45% more light than conventional reflectors) □ —48" parabolic, high output reflective hood □ —20" adjustable white enamel reflector □ System includes a 140,000 lumen-24,000 hr. Sodium bulb ..... \$269.50
- ★ 400 watt DELUXE—14" high temp. white enamel reflector. Includes 50,000 lumen-24,000 hr. Sodium bulb ..... \$189.50
- ★ MINI-MIGHT GROW LIGHT—Our compact powerful (16,000 lumens) grow light employs a highly efficient High Pressure Sodium lamp (3 year bulb life) and a self-contained Transformer-Ignitor. Costs only 15c a day (18 hours on) or about \$4.50/month to operate. 15" reflector—good for 3'x3' area. Sale priced at \$99.00+\$5.00 shipping, anywhere in U.S.A. ..... \$99.00

### LOW PRESSURE SODIUM—(our most efficient light)

- ★ 180 watts produce 33,000 lumens. Great for flowering. Excellent for side light. Deluxe fixture. Ventilated ballast box ..... \$195.00

### ACCESSORIES:

Replacement light bulbs available for all our systems at our low everyday prices.

- ★ High Pressure Sodium Conversion Bulbs that work in metal halide ballasts.  
1000 watt—24,000 hr. .... \$139.00 400 watt—24,000 hr. .... \$69.00
  - ★ 15 amp Paragon timer (works on all our systems) ..... \$14.95
  - ★ CO<sub>2</sub> Regulator/Distributor —Maintains CO<sub>2</sub> at a constant level while the light is on to promote up to 25% increase in growth. For growing areas 25 sq. ft. to 1000 sq. ft. Includes all gauges and distribution lines. Plugs into your light's timer (tank not included) ..... Sale Priced \$139.00
  - ★ Solar Shuttle™ Track—moves your lamp quietly and efficiently back and forth above your plants on a 6-foot track in 40-minute cycles increasing the coverage of your lamp ..... \$99.00
  - ★ Solar Shuttle™ Extender—adds another 6-foot track to the end of your Solar Shuttle™ so you can run two lights off of one shuttle ..... \$39.95
- Grow and Bloom Nutrient in granular and liquid form available on request.



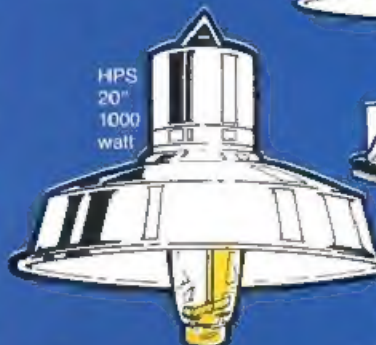
46" Super  
Reflective  
Aluminum  
Hood



20" Horizontal  
Super Reflective  
Hood



MH  
14"  
400  
watt



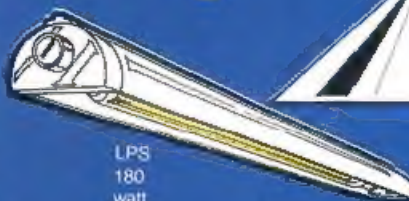
HPS  
20"  
1000  
watt



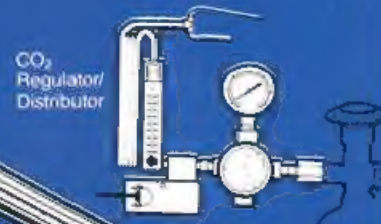
MH  
Deluxe  
Ballast



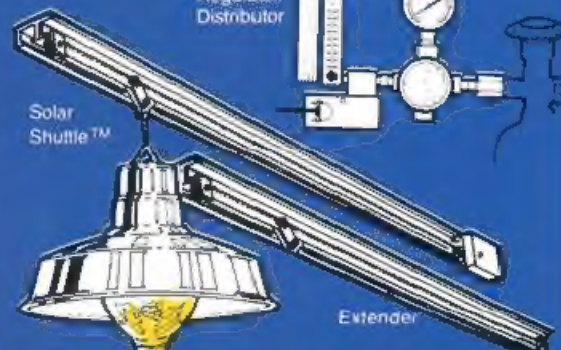
Mini  
Might  
Grow  
Light



LPS  
180  
watt



CO<sub>2</sub>  
Regulator/  
Distributor



Solar  
Shuttle™

Extender

ONE YEAR PARTS & LABOR GUARANTEE • 30 DAY MONEY BACK  
GUARANTEE • MOST ORDERS SHIPPED IN 24 HOURS  
C.O.D. ORDERS WELCOME • NO DEPOSIT REQUIRED  
QUANTITY PRICES AVAILABLE • CALL FOR FREE CATALOG



ENERGY SAVERS UNLIMITED, INC.

22138 SOUTH VERMONT AVE. #C. TORRANCE, CA 90502

Toll Free Outside California (800) 421-2994 In California Call Toll Free (800) 538-3400



Prices do not include shipping



GET THINGS  
GOING WITH

BEFORE!



**FASTONES**

STIMULANTS  
DIET AIDS  
SLEEPING AIDS

LOWEST PRICES ANYWHERE  
WE WILL MEET OR BEAT ANY  
REASONABLE PRICES BY 10%  
ORDERS SHIPPED IN 24 HOURS  
100% GUARANTEE

FAST ONES™  
"Super Strength"

SPECIAL PRICE  
1000 | 100  
\$29.95 | \$6.95

FASTONES  
"FREE SAMPLES"  
CODE  
#30  
200 MGS  
CAFFEINE

NOT  
SURE?  
SAMPLE  
PACK

MAXI PACK  
1000 TABLETS  
& CAPSULES  
TOTAL/10 TYPES  
\$42.50  
CODE #26

MINI PACK  
500 TABLETS &  
CAPSULES  
TOTAL/5 TYPES  
\$22.50  
CODE #31

INGREDIENTS MAY VARY



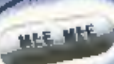
1000 | 100  
\$30.00 | \$7.00  
CODE #3  
175 MGS CAFFEINE



1000 | 100  
\$30.00 | \$7.00  
CODE #4  
175 MGS CAFFEINE



1000 | 100  
\$35.00 | \$7.00  
CODE #8  
200 MGS CAFFEINE



1000 | 100  
\$30.00 | \$7.00  
CODE #20  
200 MGS CAFFEINE

NOTE

Our products bear our trademark. They cannot be confused with any other product on the market. Any attempts to offer these products for sale as a controlled substance or prescription drug may be a crime. This may result in criminal prosecution. Compliance with any law is the purchaser's responsibility.

AFTER!



EXTRA  
STRENGTH

CUSTOMER SERVICE  
1-813-526-1734

PAYMENT:

- MONEY ORDER
- PERSONAL CHECK (MUST BE BANK PRINTED WITH THE SHIP TO ADDRESS, ACCOUNT MUST BE 6 MONTHS OLD. NO PERSONAL CHECKS OVER \$75. PAYMENT TO 20TH CENTURY ENTERPRISES, INC.)
- C.O.D. (CASH ON DELIVERY) (PHONE IN ONLY) (\$12.50 min.)
- ALL ORDERS IN US FUNDS

Offers subject to change w/ notice. Take only as directed. Res. package statements, no sales to minors or where prohibited by law. Adver. products have various levels of non-controlled ingredients. Q.T. Not to be Mixed with Alcohol.

FAST ONES FIGHTS THAT DROWSY FEELING BY IMPROVING YOUR STAMINA, COORDINATION, CONCENTRATION!

FAST ONES NEVER LETS YOU MISS THOSE SPECIAL MOMENTS!

FAST ONES GIVES YOU EXTRA STAMINA TO LOSE THOSE UNWANTED POUNDS AND INCHES THAT MAKE YOU FEEL SO UNATTRACTIVE AND UNDESIRABLE!

FAST ONES LETS YOU LIVE A MORE EXPERIENCING LIFE!

CHOOSE FROM A WIDE VARIETY TO GET YOUR EXACT TYPE AND STRENGTH YOU PREFER. THAT'S SOMETHING STORES CAN'T DO!

STEREUM  
MEDIUM

1000 | 100  
\$29.95 | \$7.00  
CODE #1  
200 MGS CAFFEINE



1000 | 100  
\$29.95 | \$7.00  
CODE #5  
150 MGS CAFFEINE



MILD  
(THICK)



1000 | 100  
\$19.00 | \$7.00  
CODE #9  
200 MGS CAFFEINE

CLEAR UPS  
(THIN)



1000 | 100  
\$19.00 | \$7.00  
CODE #10  
25 MGS EPHEDRINE

SURE CURE II  
DIET AID  
APPETITE SUPPRESSANT



1000 | 100  
\$35.00 | \$10.00  
CODE #24B  
75 MGS P.P.A. (TIME RELEASED)



50 MGS  
DIPYRHYDRAMINE  
100  
\$10.00  
CODE #25

RUSH ORDER TO:  
20th Century Enterprises, Inc.  
P.O. Box 84001  
St. Petersburg, FL 33784-4001

ORDER BY PHONE  
1-800-252-7112  
\*Customer Service  
1-813-526-1734

(ORDER FORM)

PRODUCT NUMBER  
ECONOMY SIZE 1000

QUANTITY

All telephone orders must be valued at \$12.50 & up, shipping & handling not included. \*No Exceptions\*

\*PLEASE PRINT\*

SEND ORDER TO:

Name Address City State Zip Phone

CODE

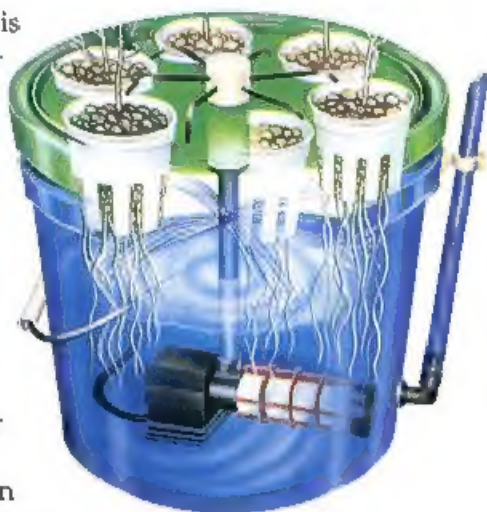
Orders Shipped in 24 Hours!

Sub-Total  
Add Sales Tax  
Shipping \$ 3.50  
Total



# The RainForest. Suddenly, all other hydro-systems are obsolete.

**D**iamond lights is proud to introduce the first, fully aeroponic modular system, the RainForest. Each RainForest module is completely independent and allows infinite numbers of modules to be interconnected by just adding a controller reservoir.



The RainForest can root your cuttings or germinate your seeds, fast and efficiently without problems, and take them to harvest without having to do any transplanting. The results will amaze you.

The RainForest system is fully protected by U.S. and International patents.

Single module ..... \$79.95

Optional reservoirs:

8 gallon controller reservoir (up to 12 modules) 39.00

19 gallon controller reservoir (up to 36 modules)..... 49.00

## THE ORIGINAL AQUAFARM MODULAR SYSTEM.

Expandable from 1 to 36 modules by simply adding a controller reservoir. The unique aeration feeding system creates fast growth and large yields. The AquaFarm is the perfect solution for your mother plants.



Single module ..... \$ 58.00

4 modules with controller ..... 209.00

6 modules with controller ..... 309.00

8 modules with controller ..... 409.00

10 modules with controller ..... 469.00

12 modules with controller ..... 549.00

## OUR LIGHTS CAME ON EIGHT YEARS AGO.

Since then, we've shipped thousands of Metal Halide and High Pressure Sodium light systems. Some of the features are:

- 20'-600v lamp cord with 8' power cord.
- Ventilated socket housing with connections OUTSIDE, away from heat.
- Double panel, ventilated ballast enclosure for maximum cooling.
- Two year guarantee-1 year bulb.
- Four hood designs to choose from: 45" Standard, 45" Parabolic, 21" Parabolic and our new Optically Designed Horizontal.

1000w-Halide. \$198.00 1000w H.P. Sodium \$258.00

400w-Halide. 138.00 400w H.P. Sodium 188.00

45" Parabolic-Add \$10.00.

220v wiring-no charge.

## THE SUN DOESN'T STAY IN ONE SPOT.

That's why the SunCircle™ or the Solar Shuttle can help you spread light into corners that normally wouldn't receive it.

Shuttle can help you spread light into corners that normally wouldn't receive it.

SunCircle 1. \$135.00 SunCircle 3..... \$248.00

SunCircle 2. 189.00 Solar Shuttle 6' track. 95.00

Solar Shuttle 4' track. 85.00



Lights not included.



FOR ORDERING OR OUR FREE CATALOG,  
PHONE 800-331-3994

For Technical Information and CA Residents (415) 459-3994

## DIAMOND LIGHTS

713 MISSION AVENUE · SAN RAFAEL, CA 94901

"We are different from the rest"

Most money order, credit card, COD orders shipped within 24 hrs.

Prices do not include shipping.

Dealer inquiries welcome.

CA residents add 6% sales tax.

VISIT OUR SHOWROOM



# C O N T E N T S

## F E A T U R E S

### THE STEPS TO LEGALIZATION

by Ed Rosenthal.....32

For over ten years the anti-pot forces have faced no opposition on the state and local levels.

If pot laws are ever going to change, we need to educate our state legislators.

### INTERVIEW: CINDY ORNSTEEN

by John Holmstrom.....35

### BHANG! BHANG! YOU'RE HIGH!

by Peter Gorman.....37

Although cannabis has been declared illegal in most of India, one province had the courage to refuse to comply with the law.

### THE INDOOR ORGANIC VEGETABLE GARDEN

by Steven Hager.....40

Learn how a \$500 investment can provide you with safe, nutritious food year-round.

The debut of a new column.

### HOW TO DOUBLE YOUR YIELD WITH ROCKWOOL

by Jorge Cervantes.....42

The rockwool revolution has already overtaken Europe. Are all the claims true?

### THE 1989 CANNABIS CUP AWARDS

by Ed Rosenthal.....45

Once a year, the biggest egos in the world of cannabis meet to declare the world's greatest pot. Here are the results.

### HOW TO GROW MAGIC MUSHROOMS

by O.T. Oss and O.N. Oeric.....64



## C O L U M N S D E P A R T M E N T S

#### PAGE SIX

by Steven Hager.....6

#### LETTERS.....14

#### ONE WOMAN'S DOPE

by Maia Szalavitz.....21

#### NORML-IZER

by Mary Lynn Mathre.....23

#### OUTLAW NATION

by Ed Rosenthal.....24

#### HIGH ART

by Lou Stathis.....39

#### LIGHT INTENSITY

by Prof. T. H. Custer.....52

#### DO-IT-UR-SELF SEEDLING

#### NURSERY

text and photos by Kyle

Roq.....54

#### ASK ED

by Ed Rosenthal.....62

#### HIGHWITNESS NEWS

edited by Steve Bloom.....19  
Reports on the July 4th Smoke-in  
in Washington, D.C., an Abbie  
Hoffmann tribute, what's new in  
Peru, and more.

#### TRANS-HIGH MARKET QUOTATIONS

edited by Edie Barrett.....27

#### CENTERFOLD.....50

#### PRODUCTS.....69

#### CLASSIFIEDS.....78

#### BOOKSTORE.....80

#### THE ULTIMATE PARTY

#### MAGAZINE

edited by John

Holmstrom.....89

The premiere of Hooch Harris, a  
column devoted to alcohol!



p. 93





# PAGE SIX

## PUBLISHER

ROBERT ARONSON

## EDITOR-IN-CHIEF

STEVEN HAGER

## EXECUTIVE EDITOR

JOHN HOLMSTROM

## ART DIRECTOR

FLICK FORD

## MANAGING EDITOR

ERIC DANVILLE

## CONTROLLER

SHEILA AVON

## CIRCULATION MANAGER

RAYMOND L. BLACKSTOCK

## ADVERTISING MANAGER

ELLEN SPENCER

## ASSISTANT EDITOR

JUDY McGUIRE

## CONTRIBUTING WRITERS

ED ROSENTHAL, CULTIVATION

STEVE BLOOM, NEWS

BRAM, INDOOR GROW

MIKE SAPPOL, COPY

ROBERT CONNELL CLARKE,

THE GENERAL,

PETER GORMAN, RA JAMES,

DEAN LATIMER,

AID MacSPADE, JAMES MARSHALL,

CARLO McCORMICK, KYLE ROQ,

LOU STATHIS

## CONTRIBUTING ARTISTS AND PHOTOGRAPHERS

BRIAN SPAETH, DESIGN

ELIN WILDER, PHOTOS

DAVID ALLEN, ACE BACKWORDS,

ANDRE LEROY DAVIS,

ERIC DROOKER, JOHN EDER,

BOB FINGERMAN,

ANDRE GROSSMANN,

MILTON KNIGHT, LENNIE MACE,

JAMES ROMBERGER,

JEFF VAUGHN, J.D. KING,

CAPT. WHIZZO

## NATIONAL ADVERTISING OFFICE

211 EAST 43RD STREET

NEW YORK, NY 10017 (212) 972-8484

## FOUNDING EDITOR

THOMAS KING FORCADE, 1945-1978

I get a lot of letters from readers asking about the annual Cannabis Cup Awards, most of whom want to know how they can go about becoming a judge. I guess they don't realize how much work is involved.

First of all, most of the judges get a roundtrip ticket to Holland, one of the few countries where pot is legal--or at least officially tolerated. As soon as they arrive--jetlagged and exhausted--they are handed about 20 different samples of the finest cannabis tops grown in Holland during the previous year, which means that in order to determine a winner, they have to smoke enormous amounts of free pot during the next six days.

Then, of course, there's all the work involved of having to fill out the official ballots, writing comments, etc., while, at the same time, having to attend free dinners and visit Cannabis Castle and that sort of thing. It's a tough job.

How can you become a judge? Well, if you're an internationally-known celebrity, that's easy. Just have your secretary write us a note, and we'll put you on the list. Gilbert Shelton (creator of the Fabulous Furry Freak Brothers) stopped by the HT office the other day and expressed an interest, so you know he's down for next year.

But what about the average pothead? How can he or she be a judge? Well, next year we're going to make that possible. All you have to do is join the Freedom Fighters (see ad on page 71), support the cannabis protest movement, and you'll be eligible to join Gilbert at next year's contest. You see, the Freedom Fighters get decorations for every rally they attend, and the most decorated member gets a free trip to the Cannabis Cup.

For those who have already joined: Don't forget to show up in Madison, Wisconsin, on September 30th for the Midwest Harvest Festival. See ya there.



*Steven Hager*

Steven Hager  
Editor-in-Chief

Gilbert Shelton.

SEPTEMBER 1989 • No. 169 • (ISSN #0362-630X) is published monthly by Trans-High Corporation, Robert Aronson, President. Mail subscriptions (payable in US funds) and changes of address (please include most recent mailing label) to PO Box 410, Mt. Morris, IL., 61054. Subscriptions in the United States: 12 issues for \$29.95, 24 issues for \$54.95. Single copy price: \$3.95. In Canada: 12 issues for \$37.45, 24 issues for \$68.95. All other countries by surface mail: 12 issues for \$37.45. All other countries by airmail: \$67.00. Offices at 211 East 43rd St., New York, NY 10017. Second class postage paid at New York, NY, and at additional mailing offices. Manuscripts must be accompanied by a self-addressed stamped envelope. All contributions will be carefully considered, but the publishers and editors assume no responsibility for loss or injury to unsolicited material. Copyright 1989 by Trans-High Corporation. Nothing in this publication may be reproduced in any manner, either in whole or in part, without specific written permission of the publisher. All rights reserved. "High Times" is a registered trademark. HIGH TIMES and Trans-High Corporation assume no responsibility for any claims or representations contained in this magazine or in any advertisement, nor do they encourage the illegal use of any of the products advertised within. All advertising and advertised products void where prohibited. Postmaster: Please send address changes to HIGH TIMES, PO Box 410, Mt. Morris, IL., 61054.



# HYDROFARM

Indoor Gardening Products

## NEW! HYDROFARM EBB & FLOW SYSTEM

Manufactured in the rugged and durable tradition of Applied Hydroponics. Exclusive multi-ridge and channel pattern insures even nutrient distribution with complete drainage and aeration for all sizes of Rockwool. You can even use Geolite® or your favorite potting mix in standard plastic pots!

- Holds up to 56 large Rockwool cubes, 450 starter cubes or 3 slabs
- Solid Construction—50% thicker than ordinary trays
- Large 25 gallon reservoir eliminates constant maintenance

### NOTHING EXTRA TO BUY OR BUILD!

System includes: Ebb & Flow Tray (42" x 26" x 6" deep), 25 gallon reservoir, pump, timer, nutrients, Rockwool cubes, fittings, complete instructions **\$189.95**

\*Optional Super Dome Cover makes a 14" tall greenhouse **\$44.95**

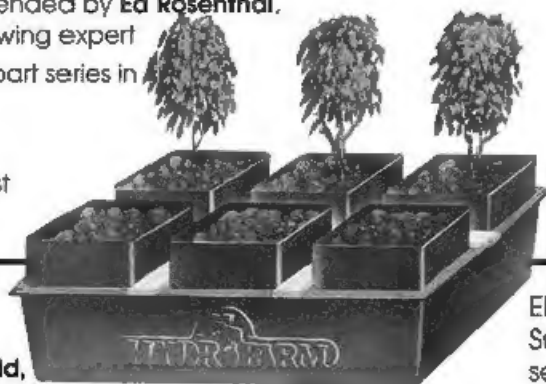
Super Dome™ Cover  
Optional



## NEW! LIZ'S GARDEN™

It's Simple, Quick, & Easy!

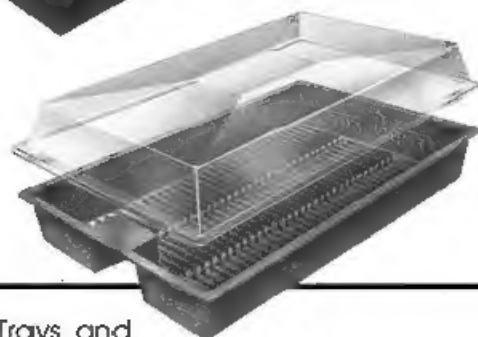
- ★ Designed and recommended by **Ed Rosenthal**, famous author and growing expert
- ★ Proven! Featured in six-part series in *High Times*, 1989
- ★ Grow six big plants
- ★ Compact—measures just 16" x 24"



Nothing extra to buy or build,  
all you add are seeds and water!

System includes: reservoir, six planters, pump, nutrients, Rockwool cubes, Geolite media blend, and complete instructions **\$49.95**

★ **Bonus!** Includes exclusive growing tips from **Ed Rosenthal**



Ebb & Flow Trays and Super Dome Covers available separately to customize your growing area

- Set up multi-unit systems
- Trays rest on any table or bench top
- Make a 14" tall greenhouse with optional Super Dome Cover

EBB & FLOW TRAY **\$49.95**  
(42" x 26" x 6" deep. Fittings included)

SUPER DOME COVER **\$44.95**

More Growers and retailers rely on our **HYDROFARM** products than all other brands of equipment combined! Applied Hydroponics is the oldest and the largest manufacturer. Why? Because **HYDROFARM** products have been designed for optimum performance and manufactured for quality, safety, and durability since 1977.

**New 1989  
COLOR  
CATALOG  
FREE!**

### CALL TOLL FREE

WESTERN U.S. <b>1-800-634-9999</b>	EASTERN U.S. <b>1-800-227-4567</b>
APPLIED HYDROPONICS, INC. 3135 Kerner Blvd. San Rafael, CA 94901	APPLIED HYDROPONICS, INC. 208 Route 13 Bristol, PA 19007

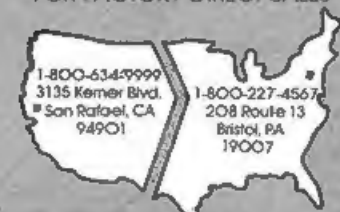


\*NEW RETAILER INQUIRIES INVITED

HYDROFARM PRODUCTS ARE AVAILABLE FACTORY DIRECT OR FROM YOUR NEAREST AUTHORIZED DEALER. TURN THIS PAGE FOR DETAILS.



**APPLIED HYDROPONICS, INC.**  
FOR FACTORY DIRECT SALES



**Call or visit your nearest retailer:**  
Prices, special offers, and hours may vary

**NEW STORES\***

- ARIZONA**  
Red Mountain Hydroponics (602) 464-1797  
121 S. Country Club Dr., Mesa, AZ 85210
- CALIFORNIA**  
Sacramento Lights & Hydro. (916) 451-1701  
7830 Cucamonga Ave., Sacramento, CA 95826  
So. California Lights & Hydro. (818) 243-0068  
4527 San Fernando Rd., Glendale, CA 91204  
HydroLights (916) 895-8301  
347 Nord Ave., Ste. #1, Chico, CA 95926
- COLORADO**  
Rocky Mtn. Lighting & Hydro. (303) 426-5020  
7100 No. Broadway, Ste. 5-5, Denver, CO 80221
- FLORIDA**  
\* Gold Coast (Fr. Lauderdale Opening Soon!)  
Call (305) 666-6805 for info  
Gold Coast Lights & Hydro. (305) 666-6805  
5794 S.W. 40th St., Miami, FL 33155  
Worms Way-Florida (813) 621-1792  
5311 50th Commerce Park Blvd., Tampa, FL 33610
- GEORGIA**  
Southern Lights & Hydroponics (404) 368-0288  
5634-F Buford Hwy., Norcross, GA 30071
- ILLINOIS**  
Chicago Indoor Garden Supply (312) 289-4545  
297 N. Barrington Rd., Streamwood, IL 60107  
High Tech Indoor Gardening 1-800-747-LITE  
2209 Washington Rd., Washington, IL 61571
- INDIANA**  
Orange Sunshine (219) 926-1020  
114 N. Calumet, Chesterton, IN 46304  
Susan's Organic Garden Ctr. (219) 258-0221  
102 Lincolnway E., Mishawaka, IN 46544  
Worms Way-Indiana 1-800-274-9676  
4620 S. State Road 446, Bloomington, IN 47401
- KENTUCKY**  
\* Bluegrass High Tech Garden Supply (502) 543-5933  
4422 East Highway 44, Shepherdsville, KY 40165
- MASSACHUSETTS**  
Worms Way-Massachusetts (508) 797-1156  
1200 Millbury, Ste. 8-G, Worcester, MA 01607
- MICHIGAN**  
Indoor Gardening Center, Inc. (313) 451-0797  
8539 Lilley Rd., Canton, MI 48187  
Call for additional store locations.
- MINNESOTA**  
\* Indoor Gardening Center/Minneapolis  
Call 1-800-527-4769 For info
- MISSOURI**  
\* Worms Way-Missouri (314) 878-2773  
12156 Lackland Rd., St. Louis, MO 63146
- NEW YORK**  
\* Northern Lights & Hydroponics (716) 634-8290  
Airport Plaza, 4214 Union, Cheektowaga, NY 14225
- NORTH CAROLINA**  
Pathway (919) 767-0042  
4500 Indiana Ave., Winston-Salem, NC 27106
- OHIO**  
\* Northern Lights & Hydroponics 1-800-837-2774  
4722 Great Northern Blvd. N. Olmstead, OH 44070  
Northern Lights & Hydroponics (216) 922-0777  
2039 State Road, Cuyahoga Falls, OH 44223  
Waterbeds & Stuff (614) 276-4722  
3788 W. Broad St., Columbus, OH 43228  
7 Ohio stores - Mail orders call - Direct Source  
1-800-848-1408, Ohio, 1-800-971-1668
- OKLAHOMA**  
Urban-Tek Growers Supply (405) 843-1888  
2911 W. Wilshire, Oklahoma City, OK 73116
- PENNSYLVANIA**  
Northern Lights & Hydroponics 1-800-937-9930  
4 Mahoning Ave., New Castle, PA 16102  
Northern Lights & Hydroponics 1-800-635-1383  
2809 Pine Ave., Erie, PA 16504  
Northern Lights & Hydroponics (412) 941-6335  
Rough Bld., 4050 Washington, McMurray, PA
- TEXAS**  
Brazos Indoor Garden Ctr. (713) 661-9473  
5815 Bellaire Blvd., Houston, TX 77081
- WISCONSIN**  
Madison Indoor Garden Supply (608) 221-9292  
6420 Bridge Rd., Monona, WI 53113
- CANADA**  
Brita Lite/Que Pousse (514) 489-3806  
2215 Walkley, Montreal, Quebec, CAN H4B2J9



**Now!**  
The only **UL** listed  
Grow Light Systems  
on the market!

**Dear Customers:**

Thanks to you, our Grow Wing and Sunburst grow lights are the most popular lights in use today. Now, we've set a whole new standard for performance and quality with our new **UL SERIES** of grow lights.

We've made our new Super Grow wing reflector **20% larger** to cover more area with the **highest intensity** uniform light pattern ever offered! The UL SERIES also incorporates a UL-required tempered glass lens and is constructed out of strong steel (not thin aluminum).

Don't be fooled by others that claim to use UL components (any electrical plug is a UL component). This is **not** the same thing as having the **entire** system UL listed. Only HYDROFARM - UL SERIES lights have been professionally tested and are listed by UL (Underwriters Laboratories), the world-famous electrical and safety testing organization.

We continue to offer our top quality UL listed ballast assembly with all our lights, and of course, our often imitated **Safety-First** wiring system.

We will continue to offer you only the best quality growing equipment, and our being the **first** company in the market to offer UL listed grow lights says how we feel about this commitment.

Thank you for your confidence in us.

**Applied Hydroponics, Inc.**  
Makers of Hydrofarm Indoor  
Gardening products

**BETTER DESIGNED - BETTER BUILT**

**HYDROFARM LIGHT TRACK™**

- Hang horizontal or vertical lights
- No-drip motor; lifetime lubrication
- Heavy-duty four wheel carrier
- Full five year guarantee

**OTHERS**

- Hang vertical lights only
- Motor drips; needs oiling
- Weak one wheel carrier
- One year guarantee only

**NEW!**

**THE HYDROFARM LIGHT TRACK™**

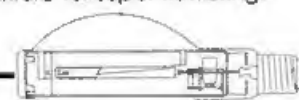
**FASTER! 20% more laps per light cycle.**

6' Ft. System **\$99.95**  
6' Ft. Extension **\$39.95**

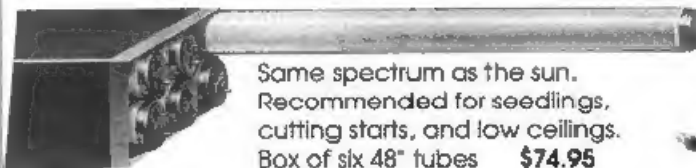


**SODIUM CONVERSION BULBS**

Simply screw one into your halide fixture for super flowering!



**CYLINDERS OF SUNLIGHT™**



Same spectrum as the sun.  
Recommended for seedlings,  
cutting starts, and low ceilings.  
Box of six 48" tubes **\$74.95**

940 watt - for 1000 halide **\$137.95**  
360 watt - for 400 halide **\$67.95**  
220 watt - for 250 halide **\$67.95**  
150 watt - for 175 halide **\$67.95**

**HYDROFARM CO<sub>2</sub> SYSTEM**



- Fertilize the air
  - Double growth and flowering
  - Unique programmable timing
- \$149.95**

**CLIMATE CONTROLLER**

Automatically activates fans on  
humidity or temperature rise!



**Climate Controller** **\$69.95**  
Temperature Controller only **\$39.95**  
Humidity Controller only **\$39.95**

**Additional grower-proven Hydrofarm products available:**

Hydrofarm Grow Nutrient 1lb.	\$12.00	Aspenair Ionizer	\$49.95	45" Vertical Reflectors - no extra charge	
Hydrofarm Bloom Nutrient 1lb.	12.00	Hydrofarm Air Cleaner	99.95	Whirligig 2 - Arm	\$129.95
Cutting Concentrate 2 oz.	7.95	Turbo Air Cleaner	319.95	Sun Circle 1 - Arm	139.95
Cutting Starter Kit	19.95	Vent Fan 140 CFM	44.95	Sun Circle 2 - Arm	199.95
Digital pH Pen Package	59.95	Vent Fan 265 CFM	69.95	Sun Circle 3 - Arm	259.95
Hydrofarm pH Lower 16 oz.	7.95	Vent Fan 465 CFM	89.95	Hydrofarm Light Meter	29.95
Hydrofarm pH Raise 16 oz.	7.95	Wall Mount Osc. Fan	59.95	Rockwool— <b>PLUS MUCH MORE!</b>	
Geolite 5 Gallon Bag	14.95	Mylar 4' x 50' Roll	39.95	*All prices plus shipping	



**NEW!**  
**SUPER GROW WING**  
**-UL SERIES™**

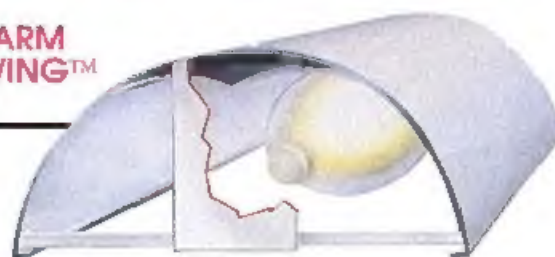


# Grow With The Best!

**HYDROFARM GROW WING™**  
(pat. pend.)



**BALLAST:**  
Double-wall steel construction, front and rear bi-level louvers (included with all Grow Wing and Super Grow Wing Systems).



**Delivers more light intensity than any other reflector in its class!**

- Horizontal system with double parabola design
- Electro-white finish • Strong steel construction
- **Safety-First** wiring system • High output super bulbs

**SUPER GROW WING-UL SERIES LIGHTING SYSTEMS**

1000 Halide	\$249.95	1000 Sodium	\$319.95
400 Halide	\$199.95	400 Sodium	\$239.95

**GROW WING LIGHTING SYSTEMS**

1000 Halide	\$199.95	1000 Sodium	\$264.95
400 Halide	\$149.95	400 Sodium	\$189.95

**HYDROFARM SUNBURST™**

- Horizontal efficiency
- Built-in ballast
- Electro-white finish
- Ready to plug in



150 Sodium	\$109.95
175 Halide	\$109.95
250 Halide	\$129.95
*UL Required lens package - add \$20.00	

**HYDROFARM QUANTUM™** (pat. pend.)

**Never before has peak performance been offered in such a reliable, easy-to-use system • More Quantums in use today than all other hydroponic systems combined!**

- Rockwool medium • Multi-ridge irrigation and aeration system • Grow 20 full-size plants, hundreds of cuttings, or up to 600 starts!

- ✓ Options: Ebb & Flow, Slab, Geolite, and add-on tray packages available.

**Nothing extra to buy or build!**

**Systems include:**

Trays, stands, 25 gallon reservoir, cover, pump, irrigation system, Rockwool cubes, nutrients and instructions

**NEW! HYDROFARM EBB & FLOW SYSTEM**

**The ease of Ebb & Flow Irrigation manufactured in the rugged and durable tradition of Applied Hydroponics.**

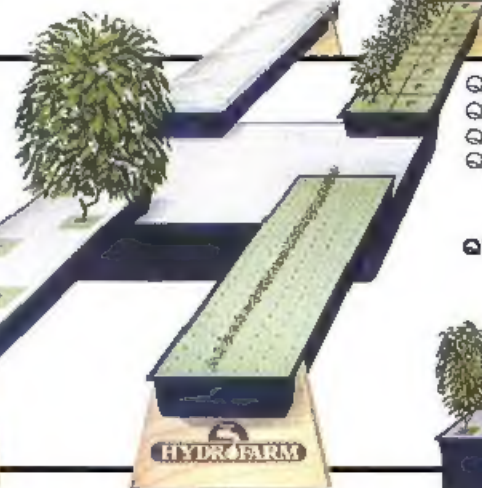
- Holds up to 56 large Rockwool cubes, 450 starter cubes or 3 slabs. • Solid construction - 50% thicker than ordinary trays • Large 25 gallon reservoir

Super Dome™ Optional

System comes **complete** with:  
Tray, reservoir, pump, timer, nutrients, Rockwool cubes, fittings and instructions. **\$189.95**

Ebb & Flow Tray Only **\$49.95**  
(42" x 26" x 6"-fittings included)

Super Dome™ Cover **\$44.95**  
Makes a 14" tall greenhouse.



Quantum Four Tray	\$199.95
Quantum Six Tray	\$259.95
Quantum Eight Tray	\$319.95
Quantum Ten Tray	\$379.95

**QUANTUM TWO TRAY \$179.95**



**NEW! LIZ'S GARDEN™**

- ☆ Designed and recommended by **Ed Rosenthal**, famous author and growing expert
- ☆ Proven! Featured in his six-part magazine series, 1989
- ☆ Compact - measures just 16" x 24"
- ☆ Just add seeds and water! **\$49.95**

**Only Applied Hydroponics offers:**

- ✓ Factories (with showrooms) on both coasts
- ✓ Fastest delivery nationwide
- ✓ New low shipping rates
- ✓ 30 day money-back guarantee
- ✓ Full five-year product guarantee (bulbs, digital pens, one year)

**Free catalog & phone orders**

**TOLL FREE** 1-800-227-4567 EAST  
1-800-634-9999 WEST

Visit our showrooms M-F 9-5, SAT 10-5  
Applied Hydroponics, Inc.

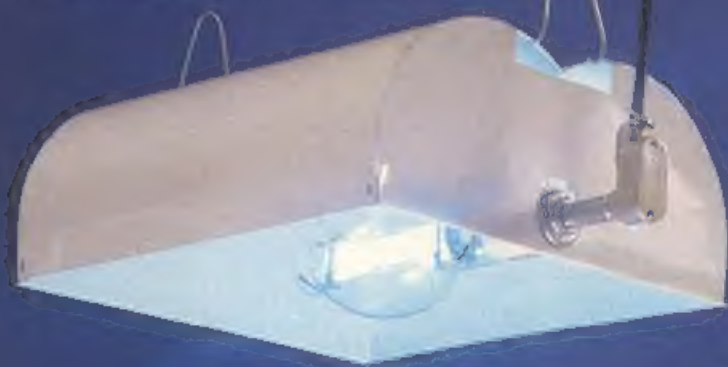
East U.S.-Phila.: 208 Route 13, Bristol, PA 19007  
West U.S.-S.F.: 3135 Kerner Blvd., San Rafael, CA 94901



CA & PA residents add 6% sales tax. All prices plus shipping.

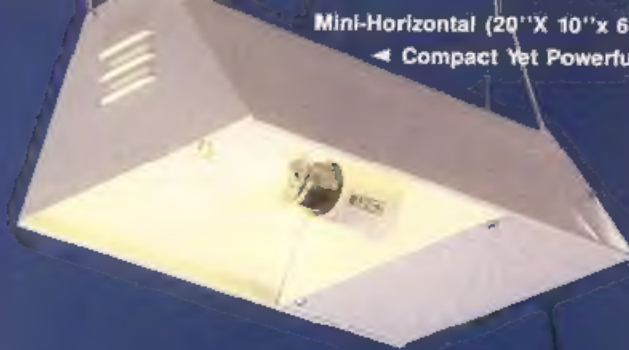


**MAX-89 "THE ULTIMATE HORIZONTAL"**  
**89% increase in light output**  
 Double Arc, low profile, adjustable, electro-white ▾



**Compare Quality & Price**  
**you are saving 5% to 40%**

**Heavy Duty Ballast ▸**  
**With 38 cooling louvers**



**Mini-Horizontal (20"X 10"x 6")**  
 ◀ **Compact Yet Powerful**



**CO<sub>2</sub> Enrichment System**

# HAMILTON'S GROW LIGHTS ARE THE NEW # 1 IN THE U.S.A.

*Only Hamilton has been honored for having its Horizontal Lighting Systems exhibited at the 1988 Hydroponic Society of America convention*

## A good grow light is the key to your indoor growing success

It is well known that Metal Halide and High Pressure Sodium full spectrum lights, especially in a horizontal system, are the best lights to promote good plant growth and to increase bud and flower production. Fluorescent systems are inefficient and do not give your plants as many light lumens as Metal Halide or High Pressure Sodium.

## How to get maximum light output

Hamilton has perfected the ultimate horizontal reflector; **Max 89. The unique double arc "v" design and the super reflective finish of Max 89 give a remarkable 89% increase in light output** over vertical mounted lights. It is not possible to design a reflector that can give more light than Max 89. Its ventilation design assures a longer bulb life. Every Max 89 has an adjustment feature which allows you to regulate light to meet the requirements of your growing area with either more concentrated or more diffused light. Max 89 has a low profile design that actually leaves more vertical space for plant growth.

### Percentage of light output increase

Hamilton Technology	89%
Max 89™	
Hamilton Technology	68%
Mini-Horizontal	

## Better safe than sorry

Many poorly designed lighting systems become fire hazards with increased use. Hamilton's UL approved heavy-duty, high temperature resistant lamp cords are not only 220° F./600 volt but have an "STO" safety and durability rating. For utmost safety, lamp cords are connected 4" away from the socket in a protective junction box to prevent fire from lamp heat build up.

## MH250 Mini-Professional System

The most powerful mini-horizontal on the market . . . . . (reg. \$148) **Sale \$119.<sup>99</sup>**

## Mini-Horizontal MH175 or HPS150

Compact (built-in ballast), powerful & economical. Ideal for small growing areas, side lighting, and cuttings (reg. \$119) **only \$95.<sup>00</sup>**

## How to get highest quality products

Our UL approved ballast components are mounted on a heavy 14 gauge steel panel with strong studs to insure whisper-quiet performance and durability. The single heavy panel acts as an excellent heat dissipator, unlike thin, double-walled heat traps that vibrate and echo irritating noise. The 3-way, 38 bi-level louvered enclosure gives maximum cooling air flow for longer ballast life. These louvers give better protection against water splash and dirt entry than screen or slot type systems. Our ballasts come with a rust protective white finish.

## Comparison of Ballast Enclosure

Hamilton Technology

**38 bi-level louvers, 3 way**

Competitor A

**12 louvers**

Competitor B (no louvers, slot type)

## NEW! Conversion HPS Bulbs that work in Metal Halide Systems

Convert your existing Metal Halide System into High Pressure Sodium by simply changing a bulb.

**1000w \$134<sup>95</sup> — 400w \$64<sup>95</sup> — 175w \$57<sup>50</sup>**

## Best value at Hamilton

Hamilton offers quality products at the lowest prices. Why should you pay inflated prices for inferior products? Order from our large selection of light and hydroponic systems.

## Hamilton's perfect plant nutrients

Great for soil, ideal for hydroponics. All macro/micro elements concentrated formulas; 1lb. makes 100 gal. of nutrient sol.  
**GROW BOOSTER 20-6-16** For rapid plant growth  
**BLOOM BOOSTER 9-30-12** Maximum budding/flowering  
**ROCKWOOL BOOSTER 10-7-16** Formulated for Rockwool  
 1lb. . . \$ 9.50 5lb. \$ . . . \$26.95 25lb. \$ . . . \$75.00

## CO<sub>2</sub> Enrichment System

Increasing CO<sub>2</sub> in the air speeds plant growth dramatically and doubles budding and flowering. Fully assembled unit includes: Regulator, Gauge, Solenoid Valve, FlowMeter, Tubing, Instructions. (Timer optional \$7) **Sale \$129<sup>95</sup>**

## Satisfaction guaranteed

Order from Hamilton with confidence that our systems are of exceptional quality, performance and value. Our light systems will perform beyond your greatest expectations. We fully guarantee your complete satisfaction with our **30-day money back policy**. Our lighting systems are guaranteed for 5 years (bulb 1 year).

## HydroRockwool4 System (not shown) . . . \$249.95

Fully automated, simple to operate, easy to maintain. For use with Rockwool medium, comes complete (cubes for germination & cuttings) (Slabs for 12 adult plants). Equipped with 12 easy-to-clean non-clogging drip emitters. Adjustable drip emitters for independent variable irrigation (Control off, low, medium & high volume nutrient sol. flow). Includes everything you need: reservoir & cover, 4 garden trays, submersible pump, rockwool cubes & slabs, drip emitters, timer, Grow & Bloom nutrients, pH Test Kit, complete instructions.

## TO ORDER TODAY CALL:

**(800) 458-7474**

**HAMILTON TECHNOLOGY CORP.**  
 14902 S. Figueroa St., Gardena, CA 90248



# THE SECRET OF SUCCESSFUL INDOOR GROWING

## the easy Hamilton way...

### Grow bigger, healthier plants faster.

**PROVEN RESULTS** Metal halide and high pressure sodium lights create the highest intensity, best quality sun's full spectrum - indoors. Fluorescent systems are weak, inefficient and do not give your plants enough light lumens for good growth and flowering.

## COMPARE & SAVE!

**Highest quality products at lowest prices**

#### METAL HALIDE: Best for fast plant growth.

**MH 1000 Watt Deluxe System** (Reg. \$238) **\$179.95**  
Choice of 24" Horizontal, 48" Parabolic or MAX-89 reflector. High quality, assembled, Q.U.I.E.T. ventilated ballast box with GROUNDING 6-OUTLET, ON-OFF CONTROL, 15AMP, PROTECTIVE CIRCUIT BREAKER, 20' lamp cord, high lumen output, 112,000 hr bulb. (Option: Upgrade to G.E. Multi-Vapor with best spectrum, add \$14.00)

**MH 1000 Watt Basic System** (Reg. \$182) **\$139.95**  
High quality, assembled, Q.U.I.E.T. open ballast, 20' lamp cord, socket, high lumen output, 12,000 hr bulb. (Option: Upgrade to G.E. Multi-Vapor with best spectrum, add \$14.00)

**MH 400 Watt Deluxe System** Ideal for small area up to 4'x4' (Reg. \$151) **\$133.95**  
24" Horizontal reflector (for MAX-89 or 48" Parabolic add \$9.95). High quality, assembled, Q.U.I.E.T. ventilated ballast box, 20' lamp cord, 36,000 lumen/20,000 hr bulb. (Option: Upgrade to G.E. Multi-Vapor with best spectrum add \$10.00)

**MH 250 Watt Mini-Professional System** For 3'x3' area (Reg. \$148) **\$119.95**  
Compact, most powerful mini-horizontal, built-in ballast, 58% more efficient than vertical systems, economical to operate. (HPS 250w Conversion bulb available)

#### HIGH PRESSURE SODIUM: Increases budding & flowering

**HPS 1000 Watt Deluxe System** (Reg. \$317) **\$255.95**  
Choice of 24" Horizontal, 48" Parabolic or MAX-89 reflector. High quality, assembled, Q.U.I.E.T. ventilated ballast box, 20' lamp cord, 5KV socket, 140,000 lumen/24,000 hr bulb. Our most powerful light for flowering.

**HPS 400 Watt Deluxe System** (Reg. \$216) **\$174.95**  
24" Horizontal reflector (for MAX-89 or 48" Parabolic add \$9.95). High quality, assembled, Q.U.I.E.T. ventilated ballast box, 20' lamp cord, 50,000 lumen/24,000 hr bulb.

**MINI-HORIZONTAL: MH 175w OR HPS 150w** (Reg. \$119) **\$95.00**  
Compact yet powerful, 20"x6" electro-white built-in ballast, economical to operate.

#### COMBINATION MH/HPS SYSTEM: Perfectly blended lights

**Combo MH 400 / HPS 400 Deluxe System** (Reg. \$378) **\$299.00**  
MH 400 & HPS 400 bulbs under a 24" Horizontal Reflector, Q.U.I.E.T. remote ballasts (For MAX-89 reflector add \$9.95). (For Combo MH 1000 / HPS 400 Deluxe add \$59.00).

**Combo MH 1000 / HPS 1000 MAX-89 System** (Reg. \$542) **\$425.95**  
Two 1000w bulbs under MAX-89 reflector, Q.U.I.E.T. remote ballasts, etc. Our best system.

**Grounded Light Timer, heavy duty, 15 Amp** (Reg. \$20) **\$14.50**

#### LIGHT MOVERS: More light coverage to grow more plants.

**Motorized Lite Track™ "Double your light coverage."** (Reg. \$99) **\$93.95**  
Best single light mover, 6' rack, covers up to 8'x10'. (EXTENDER for 2nd light \$38.95).

**SunCircle2™ "Increases flowering by blending MH&HPS"** (Reg. \$199) **\$187.95**  
Two lights rotate continuously in full circle, coverage 8'x8' up to 12'x12'.

**SunCircle3™ "Eliminates hot and dark spots"** (Reg. \$269) **\$245.00**  
Three lights rotate continuously in full circle, coverage 10'x10' up to 15'x15'.

**HYDROPONICS:** Our customers say their plant yields are three times greater and two times faster with Hamilton's automated flood/drain HYDROPRO system. Roots are provided maximum direct nutrition and aeration without soil. No soil pests, no soil odors, no weeding.

**HYDROPRO SINGLE™**, Ideal for 4 adult plants, min 2'x2' area (Reg. \$84) **\$68.95**  
includes pump, grow & bloom nutrients, timer, pH test kit, seed starter, instructions, etc.

**HYDROPRO 4™**, grow up to 16 adult plants, 3'x9' or 7'x7' area (Reg. \$199) **\$187.95**  
includes submersible pump, grow & bloom nutrients, timer, pH test kit, Jiffy 7 manual, etc.

**NEW HPS BULBS That work in metal halide systems!**  
1000 Watt (Reg. \$140) **\$134.95**    400 Watt (Reg. \$70) **\$64.95**

**CO<sub>2</sub> Enrichment System:** Increases growth by 40% (Reg. \$160) **\$129.95**  
Includes Regulator, flow meter, solenoid valve, delivery tubes, manual.

**FREE INDOOR GARDENING BOOKLET**  
With any system purchased

**ION GENERATORS:** Clean growing area of smoke, odors, pollen & pollutants.

AirEase \$49.95    Pulsair \$96.50    Phase3 for max odor elimination \$119.00

**DIGITAL pH PEN:** Instant accurate reading (Reg. \$97) **\$58.95**

**DIGITAL Dissolved Solids (Conductivity) PEN** (Reg. \$97) **\$58.95**

**ROCKWOOL • GROW & BLOOM NUTRIENTS • MYLAR • BULBS •**

**TIMERS • BLOWERS • GROWING SUPPLIES, etc. . . . . Call for Price.**

PRICE SUBJECT TO CHANGE WITHOUT NOTICE

**FREE CATALOG**



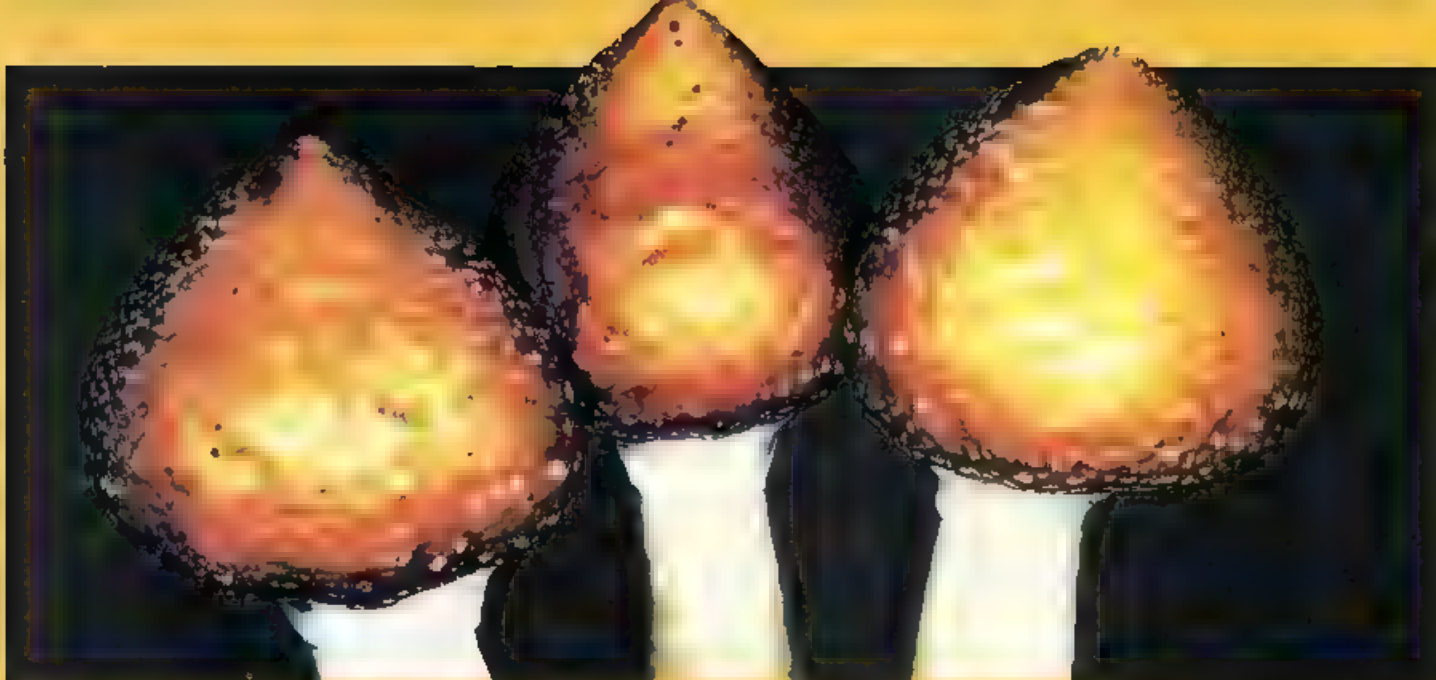
#### Why Hamilton's Customers are Satisfied?

- Highest quality products at lowest prices.
- Large inventory with shipment in 24 hours.
- Reliable service and 5 yr. guarantee (bulbs 1 yr).
- 30 day money back guarantee.
- Local pickup possible/hundreds of locations nationwide.
- Fast C.O.D. delivery by U.P.S. - anywhere.

**ORDER TODAY TOLL FREE:**  
**800 458-7474**

in **LOS ANGELES** buy direct from our warehouse:  
**HAMILTON TECHNOLOGY CORP.**  
14902 S. Figueroa Street, Gardena, CA 90248





# Grow Wild Mushrooms Forever With The **HOMESTEAD** Mushroomkit

**A** decade ago, the **Homestead Book Company** introduced the first **Psilocybe Cubensis** Mushroomkit. Since then thousands of people have learned the joys of cultivating your own mushrooms.

Each Homestead Mushroomkit includes a life time supply of fertile spores and two pounds of our rich high-yield compost. You also receive supplies, reusable tools, and ten pages of instructions from Bob Harris' book **Growing Wild Mushrooms**.

**TOLL-FREE ORDER LINE**  
800-426-6777 **CREDIT CARDS**  
**ONLY.** (except WA, AK, and HI).  
All others please call  
(206) 782-4532.



**HOMESTEAD BOOK**  
**COMPANY**  
Serving You Since 1972

**THE MUSHROOM CULTIVATOR**  
by Stamets and Chilton. A virtual  
encyclopedia for serious  
mushroom growers, with over  
400 pages of detailed  
information and photos.



- ☐ **Deluxe Psilocybe Cubensis**  
**Mushroomkit** .....\$50
- ☐ **Spore Print**...  
millions more .....\$25
- ☐ **THE MUSHROOM CULTIVATOR**  
—Highly recommended .....\$25
- ☐ **GROWING WILD MUSHROOMS**  
...Simple guide .....\$9
- ☐ **MUSHROOM CULTIVATION**  
... Video .....\$99

**Total Enclosed** \_\_\_\_\_  
**VISA** \_\_\_\_\_ **MC** \_\_\_\_\_ **Expires** \_\_\_\_\_  
**Card Number** \_\_\_\_\_  
**Signature** \_\_\_\_\_

**Name** \_\_\_\_\_  
**Address** \_\_\_\_\_

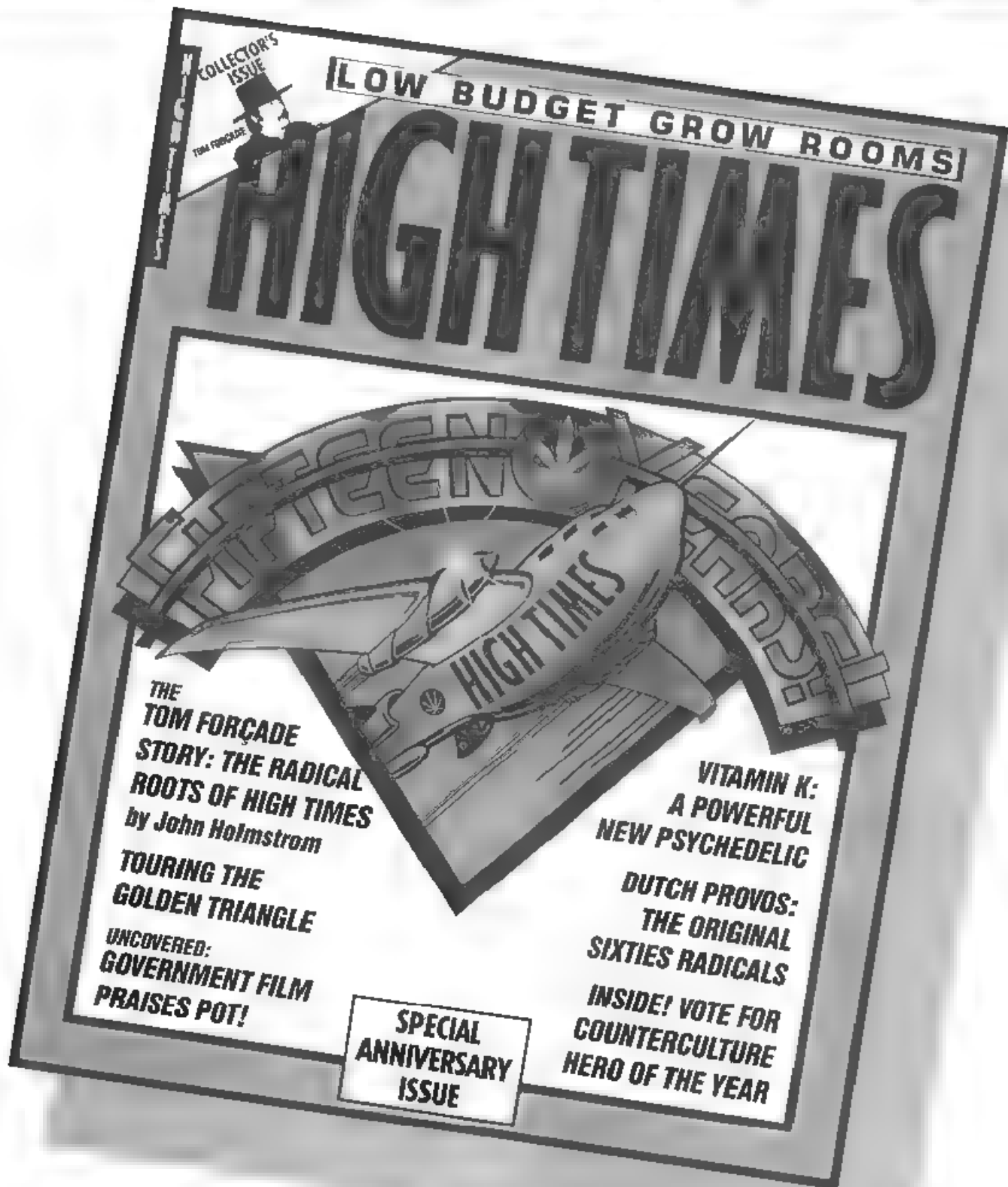
Washington residents add sales tax. Fo-  
reign add 20% US Funds. Money Orders  
processed fastest. Sold in fine stores, too.

**•HOMESTEAD•**

**P.O. Box 31608 Seattle, Wa. 98103**  
**(206) 782-4532**  
**Dealer Inquiries Welcome**



# COMING SOON!



THE EXPLOSIVE TRUE STORY OF HIGH TIMES IS FINALLY REVEALED IN OUR AMAZING 15th ANNIVERSARY ISSUE. DON'T LET THIS COLLECTOR'S EDITION SLIP THROUGH YOUR HANDS! RESERVE A COPY WITH YOUR NEWSSTAND DEALER. THE OCTOBER ISSUE GOES ON SALE SEPTEMBER 19.





## BUD FOR SALE

Just thought I'd let you know that I'm one grower who likes the idea of a 10% discount for members of the Freedom Fighters or NORML (LETTERS, July '89). I'm going to implement the discount beginning now. I only have a few customers, but every little bit helps.

--The Colorado Budmaster  
Grower of Killer Closet Clones  
Colorado Springs, CO

## GET UP, STAND UP

I'm very glad to see your rag becoming more political with every issue. I feel this is so necessary, given the insanity of today's society. We need to get the apathetic stoners off their asses--or at least wake them up.

--Reisha  
San Jose, CA

## NO JUSTICE

Although I've read many horror stories in HIGH TIMES on sentences received by marijuana users, I never thought it would happen to me. But it did. I am now serving a 20-year sentence for the alleged crime of selling two ounces to a man who was my friend for 20 years. This was my first offense of any kind. The same judge who gave me 20 years, awarded a six-month sentence to a man who sold cocaine to an undercover cop. What kind of justice is this? This is Virginia justice.

--T.S.C.  
New Castle, VA

## DON'T LEGALIZE??!

As the popularity of marijuana grows in America, so does the question of legalization. However, marijuana, no matter how popular, should not be legalized. First of all, marijuana can

# LETTERS

Send your gripes, questions, personal thoughts, and occasional compliments to: HIGH TIMES "Letters," 211 East 43rd Street, NYC 10017. Unless otherwise indicated, proper names are printed with initials only to protect the innocent, so sign your favorite pseudonym. And use a phony return address.

lead to serious health problems. It causes birth defects and creates psychological problems. If marijuana was legalized, the country would experience a major increase in the number of users. Improvements could be made in the current system before we legalize another vice.

--M.B.  
Carbondale, IL

There is no evidence to support any of your claims. There have been two long-term studies on the effect of cannabis on health, one in Jamaica and one in Costa Rica. I suggest you read them. Not only did habitual users show no ill effects from cannabis, they tended to live longer than their non-pot-smoking neighbors. On the other hand, the medical benefits of cannabis are well documented: One Florida woman recently went to court to obtain the legal right to grow her own cannabis for glaucoma. She won. After cannabis was made legal in Holland in the '60s, use (especially among teenagers) dropped dramatically, proving that drug abuse will decline once it has been severed from the illegal "outlaw thrill" factor. Several Presidential

Commissions (including one appointed by Richard Nixon) have investigated the marijuana "problem," and concluded the substance is less toxic (and less dangerous) than either alcohol or tobacco. Cannabis has been ingested by humans since the dawn of recorded history. In that time, there has never been a single death due to an overdose of marijuana. However, cannabis should not be made legal for any of the above reasons, but simply because it is our best source of food, fuel, and fiber. Because it is the fastest growing biomass, cannabis (also known as hemp or marijuana) may hold the key to reversing the Greenhouse Effect. How's that for irony? Now, if we could only get numbskulls like you to stop believing the reefer madness tales circulated by the government, perhaps we could save our ailing planet.

## NO MORE FUN?!

I am extremely distressed concerning the review of the video game "Nark" last month. The game stresses the negative image of drug dealers, an image I thought we were trying to combat. I have been a HIGH TIMES reader since the '70s. I am a woman. I have been frequently insulted by the attitude taken against females in your pages, even though that attitude has improved as of late. The women you choose to portray are usually empty-headed sluts who dance on tables. Also, who gives a shit about your HIGH TIMES invitation-only parties? None of us loyal readers are ever invited. Nobody wants to see pictures of a party they weren't invited to.

--Mother Bud  
Paterson, NJ

Hey mom, lighten up will ya? There's nothing intrinsically wrong with dancing on tables. Sometimes it can even be good for the soul. Why is it every time we try and have a little fun, we get a crackdown from the hippie mind police? As far as our parties go, most of them take place at pot rallies, and everyone is invited. If you want to get in on the more exclusive events, all you have to do is join the Freedom Fighters (see ad on page 71).

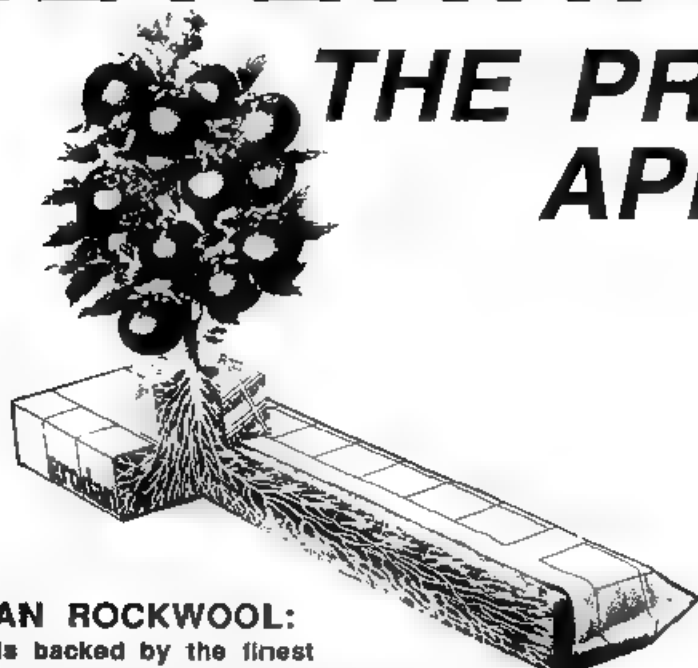
## DOCTOR BUD

I'm a 23-year-old physician's assistant. This is only my first year in the medical field and I've landed one heck of a job. I dispense medicine and I'm making \$35,000 a year. The doctor that I work for came up to me last week and requested a urine sample. He said we were missing 1,000 Diazepam. My test came back from the lab positive for marijuana. When the doc confronted me, I was shocked when he said as long as it didn't interfere with my work, everything was fine. He then pulled out a sack of the finest red bud I've ever toked. He's 58 years old and has smoked for over 30 years.

--High P.A.  
Birmingham, AL ●



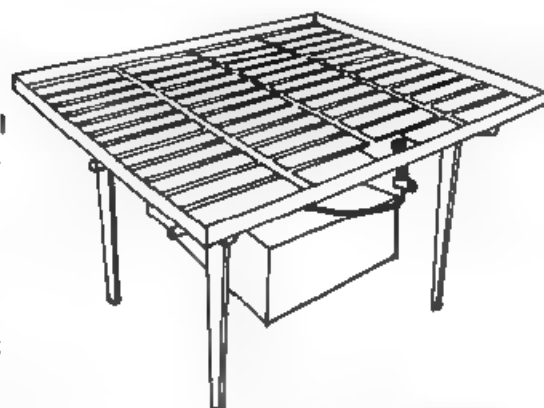
# ALTERNATIVE GARDEN SUPPLY



## THE PROFESSIONAL APPROACH FOR THE HOBBY GROWER

At Alternative we believe your best value comes from buying the best quality you can afford. Ask me about the Alternative system that fits your budget and is best suited for your crops growth. Here's to your better growing!

Best Regards,  
David



### GRODAN ROCKWOOL:

Grodan is backed by the finest technical assistance of any company we've had the pleasure of working with. We have the largest selection of Danish Grodan products available.

### PROFESSIONAL EBB & FLOW SYSTEMS:

Manufactured in Denmark, GROmaster ebb and flow tables can be ordered in widths of 4, 5, 6, and 6.5 feet by any length over 4 feet. Smaller sizes are also available. The rolling-bench feature of professional tables allows you to easily maximize the useable space in your grow room. Flo-Magic tables from Holland measure 3 feet 9 inches by 7 feet.

### LIGHTS:

We offer a complete line of Hydrofarm light systems. With the best functional design and construction, Hydrofarm lights have a 5-year guarantee, (1 year for bulbs). Our P.L. lights systems are designed in Holland. Recognized worldwide as a lighting specialist, it is P.L. that provides light in Dutch grow-rooms and greenhouses.

### GROW KITS:

Applied Hydroponic's Hydrofarm Quantum and Sun Circle's 3 foot by 3 foot Vegi-Table are just a couple of the kits available. We also offer assistance to the many growers who want to design and build their own systems using quality parts from our parts department. With professional equipment you can build your own ebb and flow table or drip system.

### GROW SUPPLIES

FERTILIZERS: Formula 1, Eco, Dyna, Hydrofarm, David's Grow and more  
ORGANICS: Worm Castings, Bat Guano, Maxicrop Seaweed, Budewel and Super-T  
CLIMATE CONTROL: CO2 Systems, Vent Fans, Thermostats, Humidistats  
LIGHT MOVERS: Light Tracks, Sun Circles, Whirligigs  
BULBS: Metal Halide, High Pressure Sodium, Fluorescent, MP5 Conversion  
TESTING EQUIPMENT: PH, TDS, Electrical Conductivity, Temperature, Humidity  
PUMPS AND TIMERS: Little Giant, Teal, Dayton, Woods  
PEST CONTROL: Predator Mites, Encarsia Formosa, Red arrow, Safer

**A.G.S. INC**

297 N. BARRINGTON RD.

STREAMWOOD, IL 60107

**FREE CATALOG**

**(800)444-2837**

RETAILER INQUIRES INVITED

**AUTHORIZED A.G.S. INC. & HYDROFARM RETAIL STORES**

**MADISON, WISC.**

**MADISON INDOOR  
GARDEN SUPPLY**

6420 BRIDGE RD.

MADISON, WI 53713

(608) 221-9292



For a catalog  
listing store  
products & prices  
call the store  
nearest you

**CHICAGO, ILL.**

**CHICAGO INDOOR  
GARDEN SUPPLY**

297 N. BARRINGTON RD.

STREAMWOOD, IL 60107

(312) 519-0078



# THE BEST OF HIGH TIMES

**VOL. VII**  
**edited by**  
**Ed Rosenthal**

*The Best of HIGH TIMES—  
108 pages of our greatest  
grow articles, selected  
and edited by the Guru of  
Ganja, Ed Rosenthal!*

*If you missed Making  
Hash with Homer Grown,  
the Guerilla Farmer, or  
the Importance of  
Ruderalis, you won't  
want to miss the Best of  
HIGH TIMES Vol VII!*



**CALL TOLL FREE  
FOR ORDERS ONLY**

800-435-0715

**UNITED STATES**

☐ 1 YEAR \$29.95

☐ 2 YEARS \$54.95

☐ **BEST OF HIGH TIMES VOL. VII, \$4.95**

**CANADA & FOREIGN**

☐ 1 YEAR \$37.45

☐ 2 YEARS \$68.95

**HIGH TIMES**

**SUBSCRIPTIONS**

**P.O. BOX 410**

**MT. MORRIS, IL 61054**



In Ill. 800-892-0753



- ☐ Payment enclosed  
☐ MasterCard ☐ Visa

Card # \_\_\_\_\_

Expiration date \_\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

PLEASE PAY IN U.S. FUNDS—ALLOW 6-8 WEEKS FOR DELIVERY.

# ORDER HIGH TIMES PRODUCTS NOW!



HTFF High Times Flippy Flyer



**CALL TOLL FREE  
FOR ORDERS ONLY**

800-435-0715

In Ill. 800-892-0753

VISA



- ☐ Payment enclosed  
☐ MasterCard ☐ Visa

Card# \_\_\_\_\_

Expiration date \_\_\_\_\_

Signature \_\_\_\_\_

PRODUCT	CODE	Quantity	Price	Cost
High Times Tote Bag	TB	_____	x \$7.95=	_____
High Times T-shirt	HTC	_____	x \$7.95=	_____
High Times Flippy Flyer	HTFF	_____	x \$3.95=	_____
			Subtotal	_____

Postage & Handling \$1.95

**HIGH TIMES  
PRODUCTS**

P.O. BOX 410

MT. MORRIS, IL 61054

**Please allow 6-8 weeks for  
processing and delivery.**

sizes: ☐ S ☐ M ☐ L ☐ XL

Total \$ \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

H P68



"The first time I marched in Madison, I was totally unprepared for the emotions that overtook me...a tremendous cathartic release was unleashed from the depths of my soul."

--Ed Hassle  
HIGH TIMES January 1989



## THE GREATER MIDWEST HARVEST FESTIVAL IS COMING!!

Join Chef Ra and the Freedom Fighters as they attend the annual pot protest in Madison, Wisconsin, on Sept. 30th. Founded by Ben Masel (HIGH TIMES counterculture hero of the year) this rally is the largest of its kind in America. Last year, over 15,000 attended. Please show your support for the cannabis protest movement by joining us this year. The demonstration begins at noon at the Library Mall and includes a free rock concert with the Soul Assassins and other bands. The concert is followed by a brief march to the State Capitol.



No. 169

SEPTEMBER '89

# HIGHWITNESS NEWS



ALL PHOTOS BY ANDRE GROSSMANN

*Jack Herer addresses the crowd, most of whom stayed through several outbursts of rain.*

## RAIN FALLS ON 20th ANNUAL D.C. SMOKE-IN

by Ed Hassie

The Freedom Fighters made a journey into the belly of the beast when they came to Washington, D.C., for the 20th Annual July 4th Smoke-in and NORML benefit concert. The weather forecast called for heavy rains all day, so no one expected a big turnout. At times it seemed doubtful if the rally and concert would ever take place.

However, around noon the skies cleared briefly and the Freedom Fighters assembled in front of their motel for the ride to Lafayette Park, directly across the street from the White House. The protest march was led by Chef Ra and Dreddy Duck, the new HIGH TIMES mascot. After arriving in

the park, the Soul Assassins, the official HIGH TIMES house band, performed pot protest song "Don't Tread On Me" in front of 300 hardcore supporters. Chef Ra, Ed Rosenthal, Dana Beal, Jon Gettman and Steve DeAngelo followed, giving speeches. The protesters then proceeded on to the concert site near the Lincoln Memorial.

"The march started with 300 people," says DeAngelo, the event's promoter, "but before long another thousand joined us." The crowd chanted slogans like "Safe Drugs Now!" and "More Pot, Less Crack."

Despite being buffeted by periodic rains, around 3,000 people remained at the concert site to hear headline act, the Butthole Surfers. Unfortunately, the sound system

never seemed to work properly, and the B Surfers were none too thrilled with the sound quality. The Soul Assassins had been scheduled to open the event, but lost their time slot due to rain and were allowed only two brief songs without a sound check before being given the bum's rush off the stage by the affair's promoters.

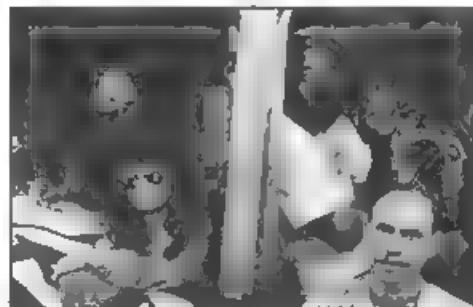
The police maintained a large presence around the concert, frequently making forays into the crowd to make arrests. In fact, they were so hostile at times that it almost seemed as though they were trying to provoke the relatively quiet, non-violent assemblage.

"I think we pulled off the show despite

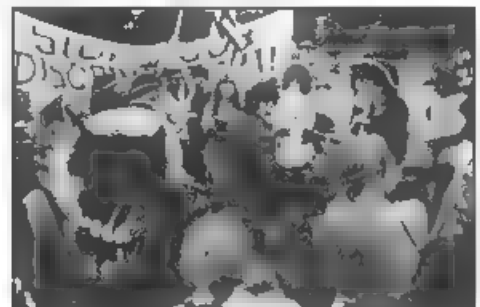
*continued on page 29*



*The Freedom Fighters congregate in front of their motel before marching to the rally.*



*Clockwise from top left: Kimona 117, Chef Ra, Ed Rosenthal, and Allegra Black Orchid.*



*The Soul Assassins perform an impromptu gig at Lafayette Park.*



# STEAL THIS TRIBUTE



**Abbie Hoffman's ex, Anita, speaking at New York's Palladium:**  
*"Abbie's gone, but you're not. Let's take the '90s."*

by Steve Bloom

In death, there was life. Abbie Hoffman, "our Holy Ghost of the Left," as Norman Mailer put it, orchestrated his last media event at New York's Palladium on June 17. Four thousand people gladly paid \$10 to be part of a four hour mixed-media celebration of Hoffman's life, called "No Regrets." Does anyone honestly believe that such a large crowd would have showed up for an Abbie-event in 1989 if he was still alive?

I expected a meager turnout but at 1 p.m. on that sunny Saturday afternoon I came upon a long line winding out of the theater down 14th Street and around the corner of Fourth Avenue. They weren't there to buy Who tickets. Even Hoffman's oldest son, Andrew, was surprised. "I knew my father was famous," he said before the program began, "but I had no idea how famous."

Andrew and younger brother America disagreed on the cause of their father's death. "I knew it was suicide the minute I heard about it," said America, who flew in from Los Angeles. "He was really depressed." America added that Abbie really wanted to be assassinated. Andrew still questioned the Bucks County coroner's finding and said that an official report had yet to be written.

"Why would my dad take 200 phenobarbitals when 12 would have been enough?" he asked.

The program conceived and developed by Johanna Lawrenson, Paul McIsaac and Ed Sanders--was upbeat and optimistic. Time and again speakers urged the audience to pick up where Hoffman left off. Banners to the left and right of the stage proclaimed ABBIE'S SPIRIT LIVES and INTO THE '90s.

An all-star cast of '60s luminaries told one yarn after another about their dear, departed Abbie. His ex-wife Anita recalled their Central Park wedding and how they married again in temple "for our parents. Several accounts of Abbie's theatrics were

offered, such as when he wore the American flag at the House hearings on Un-American Activities. "I regret that I have but one shirt to give to my country," Abbie smirked. At the Chicago conspiracy trial, Abbie and Jerry Rubin appeared one day in judges robes. When they were forced to remove the robes, Abbie revealed a Chicago cop's uniform he was wearing underneath. "It was hard keeping up with Abbie," said Rubin, who was booed at first then cheered after his short speech.

William Kunstler reminisced about the time they requested that people send hair to the Chicago courtroom for Judge Julius Hoffman, who was balding, and Rubin, who'd had his head shaved in prison. "Every day envelopes of hair came in," Kunstler said. "One was full of a green substance that

had a pleasant aroma. We hid it in the courtroom, but Abbie told me I had to get rid of it, so I introduced a marijuana motion. The Judge said that I was a resourceful lawyer and I would know how to dispose of it. I said, 'It will be burnt tonight'--and it was!"

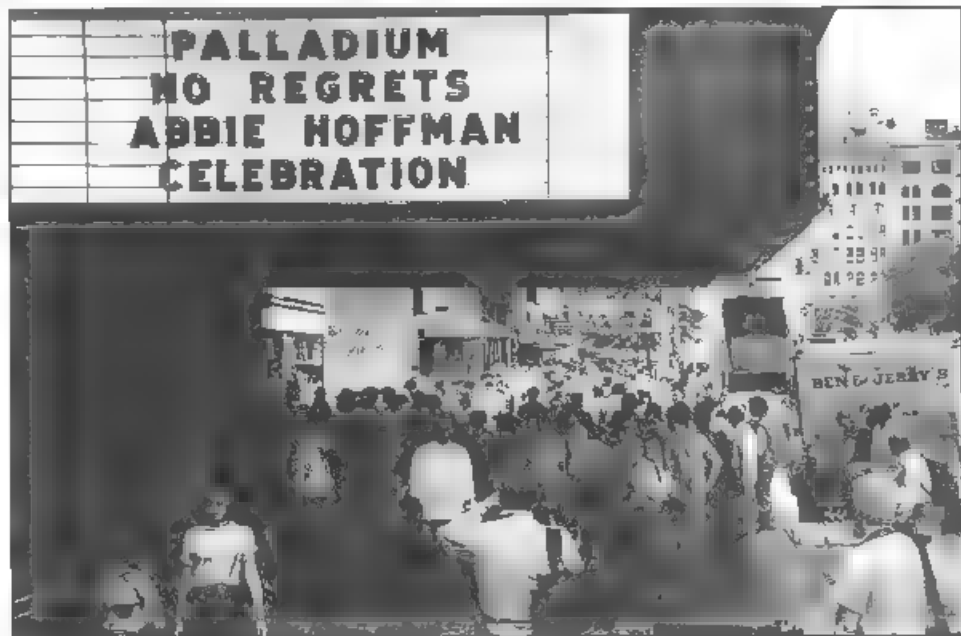
Hilarity was provided by Wavy Gravy, who delivered a song with the lyrics, "We are all climbing Harpo's ladder/Soldier, do you love my cream pies?" Brown paper bags were distributed and, at Wavy's insistence, everyone put them over their heads and performed the "funnymantra." A brief period of bag popping and throwing ensued.

But ultimately it was an emotional day for Hoffman's family and many friends--Mailer, Allen Ginsberg, Daniel Ellsberg, Ramsey Clark, Sydney Schanberg, Paul Krassner, Lee Weiner, Bobby Seale, Amira Baraka, the Fugs, David Amram, Peter Yarrow, John Hammond, Jr. and Buster Poindexter and his Banshees of Blue, to name a few--who came from all over the country to remember him in speeches and songs. Abbie's girlfriend Johanna Lawrenson wondered, "Who's gonna cook for me now?" Her voice breaking, Lawrenson pronounced that "this might be our last party together."

Enormous Max Headroom-style banks of television screens showed numerous clips from Abbie's life, including the Barbara Walters report on his return from the underground in 1980. But the last clip, of Abbie walking away from the camera down a country road in Pennsylvania, was the saddest and most jarring. He was gone and not even a seance of this proportion could bring him back.

Two of the last speakers gave the day a final lift. Chinese activist Pei Minxin told how students there ask all the time "Who was this Abbie Hoffman?" And Andrew Hoffman ended the event with a call to action. He announced his newly-formed group, AHA (Abbie Hoffman Activists), would be meeting at The Channel in Boston on August 24. Call 617-451-1050. In addition, the Abbie Hoffman Activist Foundation, which presented "No Regrets," asked that tax-deductible donations be mailed to 1501 Broadway, Suite 1310, NY, NY 10036.

Indeed in death, there is life. ●



# ONE MAN'S DOPE

## THE INVISIBLE LINE

by Mala Szalavitz

His eyes are vacant, his posture twisted. His greyish green skin color identifies him as "sick." He sits on the stoop of a graffitied brownstone amid broken glass, scattered crack vials and syringes. He's an addict. A loud street noise startles him. His eyes make contact with a passerby. They're like black holes, sending out disturbing, conflicted messages of fear, anger and despair. The passerby looks away and moves quickly down the block.

What drug did this do to him? Those who have had success in treating addicts say it doesn't matter. He has crossed what people in the business of treating addiction call "the invisible line"—the border which divides those who can use mind and mood altering drugs safely and those who cannot.

Take another look at the addict on the stoop. His dilated pupils indicate the beginnings of heroin withdrawal or the actual high of crack. Both are dangerous states during which addicts commit acts of violence. When people are high on opiates (and not in withdrawal), they tend to "nod out" into a dreamy, quiet state that lasts 4-6 hours, as long as they have their drug, they're harmless.

On the other hand, cocaine addicts are dangerous whether they are high—which lasts, at most, 20 minutes per dose—or craving the drug. The coke crash is more extreme than the heroin crash. Junkies usually sleep and are unaware of the crash, while coke addicts can't sleep, often becoming depressed and experiencing manic paranoia. These effects are even more pronounced when the extremely impure freebase, crack, is the form of coke being abused.

Crack's the worst, says Joe L., a former coke dealer. "The cocaine used to make it is the lowest quality, and the chemicals used to produce it often remain in the crack. Smoking those chemicals alone is bound to make you crazy, but in combination with freebase cocaine, it's sick. Guaranteed psychosis."

This explains why so much violence is associated with crack. One addict, Roger J., described the high and the ensuing comedown: "I felt invincible really fast. It made me wild. I just had to keep that high going. I was definitely insane. Coming down was a new experience in pain. I tried to sleep, but couldn't. My body was shaking, weak, drained of energy and rational thought. I was completely null and void—zero. It was like I was on top of the Empire State Building going down in an elevator without brakes."

What can be done to treat this fearsome addiction? First, we have to examine what's been done to treat other addictions. For

much of the history of substance-abuse treatment, addiction has been viewed as the inability to control the use of a specific substance—heroin, coke or alcohol. Whole methodologies of treatment have long been based on this mistaken assumption. Methadone, for example, is substituted for heroin with the idea that heroin addicts have a problem solely with that substance, not with their way of dealing with life in general. This narrow approach has prevented many addicts from getting the kind of help they really need.

While cocaine brings you "up" and heroin brings you "down," both take you "out," to the psychological escape routes all addicts seek. So, of course, does alcohol. Researchers have found a chemical produced in the brains of alcoholics, and not normal drinkers, which is also produced in heroin addicts. This chemical, THIQ, never metabolizes and stays in the brain forever. THIQ is an extremely addictive painkiller that causes rats, which normally would rather starve than drink alcohol, to prefer booze to water. (For more information, see *THIQ Is Alcoholism: Clinical & Experimental Research*, Grove & Stratton, NY, 1983.) One can begin to see here an actual physiological basis for the disease of addiction.

Addiction treatment in this country has overlooked these facts for years. Methadone maintenance is the classic example, and is especially important to examine in light of recent calls by public officials to produce a methadone "clone" as a treatment for crack addiction.

Supposedly, methadone blocks the physical craving for opiates without producing the high. But, in reality, as a synthetic opiate, it generates classic opiate activity—pampering, mild euphoria—in the brain. Methadone blocks heroin the way vodka blocks gin. If you're too drunk to get any more drunk, it doesn't matter how much more you drink—you just won't feel it. Methadone proponents may say otherwise, but this is how methadone really works.

Other drugs, such as naltrexone and naloxone, do block opiates. However, no junkie would willingly line up at a clinic at 6 a.m. to take them, nor would anyone resell them on the street—as is commonly done with methadone—for one simple reason: they don't get you high. Even worse for the junkie, they produce withdrawal symptoms.

Withdrawal from methadone is also more severe than from heroin. Treatment centers are rife with stories about people who were kept awake a month kicking methadone (Insomnia usually lasts a week when kicking heroin.) Says one counselor, Mary C., herself a former addict, "It would be better to maintain them on heroin."

New York *Newsday* recently ran a four-part series on methadone treatment in New York. It reported that more than 60 percent of patients on methadone take illegal drugs—



AP/WIDE WORLD PHOTOS

**Drunk on methadone: It blocks heroin like vodka blocks gin.**

usually crack or intravenous cocaine. Joe L. told *HIGH TIMES* about his experience at a methadone clinic. All methadone did for me was increase my cocaine use," he said. "I never had a clean urine the whole time I was on the stuff—and those who did were usually faking it. I saw people use their children's urine even sell their children's urine. And the counseling was a joke. I can't think of one person there who wasn't using something else—alcohol, drugs or whatever."

Despite these claims, methadone maintenance continues to be funded. Why? Why else? Money. Methadone makes millions of dollars for those who run the clinics, which are little more than drug dealerships. According to *Newsday*, even though some New York clinics have not been inspected in years, hire the barest minimum of personnel and are almost always severely neglected they're still allowed to stay in business. *Newsday's* investigation also revealed that a flourishing black market for methadone exists outside the clinics.

Nevertheless, New York recently expanded methadone treatment as an attempt to halt the spread of AIDS. But since most people who shoot heroin also shoot coke, this idea is ludicrous. Now, even more methadone will be sold, at the expense of cutting what's left of the clinic's bare-bones counseling staffs. As it is, there's no instruction in living sober," says Mary C. "No career counseling. Nothing."

At the clinics, addicts are told that they must resign themselves to lives of waiting in line for their cups of methadone. In fact, they are discouraged from trying to get off drugs, told that escaping the claws of methadone will only lead them back to the iron grasp of street drugs. Methadone has become an end—make that, a dead end—in itself. ●

*Next month: Is there a cure for crack?*

Dean Latimer, the regular ONE MAN'S DOPE columnist, has gone incommunicado. If anyone knows his whereabouts, please contact *HIGH TIMES*.



# SENDERO BLINDSIDES DEA

by Rob Hambrecht

At first hearing, the Drug Enforcement Administration's projected goal of clearing 66,000 acres of coca plants in Peru's Upper Huallaga region sounds like a *Mission Impossible* storyline. Considering that two years ago, eradication workers netted only 380 acres of plants, it appeared as if the DEA was trying to bite off more leaf than it could chew.

Actually, last year the DEA, with the help of the Peruvian police, succeeded in destroying 37,000 plants. Machetes were replaced as the tool of destruction in favor of gas-powered pruning saws, supplied by the US. When 400 workers began buzzsawing plants in February, the Shining Path guerillas who control much of the Valley began an offensive, which halted the project. In June, the DEA began occupying a base located in the heart of the Huallaga. From there the eradication program will resume.

National Public Radio's Richard Gonzales and Maria Hinoso visited the Valley in April for a report that aired in June. Gonzales told HIGH TIMES about their brave tour of journalistic duty. "About two hours drive into the Upper Huallaga the road had been dynamited every 10 feet," he said. In some places the Shining Path had exploded hammer and sickles into the road.

The NPR team wanted to meet with guerillas in the mountains, but were persuaded not to take the risk. Instead they interviewed guerillas in Lima's Canto Grande prison. "For the most part," Gonzales explained, "they were young, educated and extremely fanatical. They told us the usual rhetoric about their long term goals to take over and restructure the government of Peru."

The Peruvian police assigned to the eradication program are reluctant to fight Sendero Luminoso (Shining Path in Spanish) on their home turf. Although not universally supported, Sendero is accepted in the countryside as a lesser of two evils. Not so in Lima, where "people think anyone from the Upper Huallaga is a drug dealer," Gonzales reported, "much in the same way New Yorkers think all Californians are surfers. To Limans, the Upper Huallaga might as well be Mars." The Huallaga is located approximately 200 miles northeast of Lima, in the Andes Mountains. It produces 60 percent of the world's coca leaf. The Shining Path was charged with the assassinations of two Peruvian legislators in May. Later that month a DEA plane crashed in the Upper Huallaga, killing all nine on board. Sabotage was ruled out.

"In the Upper Huallaga, Sendero is the government," Gonzales said. "Business often makes deals with the government. There, the local coke traders want to pay as little for the cocaine as possible and Sendero wants the highest price he can get. They need each other. It's not an alliance per se and sometimes they clash. They've been known to shoot at each other, but that's bad for business."

Even worse for business is the herbicide, Spike, which is being tested in the Huallaga by the DEA. If all goes according to the



DEA's plan, aerial spraying of Spike will begin in a year or two. But the Shining Path, which boasts 2,500 guerillas in the region, just might put a stop to that as they did to the US-powered buzzsaws. ●

## BARTOS

...And if you don't learn to behave, there's more where that came from...



# SOUTHWEST SMOKE SEIZED IN RAIDS

The DEA seized more than three tons of pot in separate raids in Tijeras, NM and Capulin, CO in June. The first raid, in New Mexico (10 miles east of Albuquerque), led the Feds to the Colorado farm. Both operations used double barns, divided into upper and lower growing areas.

Five thousand plants and 500 pounds of stored marijuana were confiscated in Tijeras. After local police discovered light shining out of the wooden structures late at night during overflights, they joined 45 Federal agents in storming the barns. Television footage showed thousands of four-foot-high, fully-budded plants being cultivated in twin 50-foot-long grow rooms. In addition, the DEA estimated \$750,000 worth of grow equipment was seized. Eleven people were arrested, including the property's owner.

Three days later, 4,500 plants and 50 pounds were seized from the Capulin barns, located 175 miles north of Tijeras. The DEA just followed the Tijeras workers as they crossed the state line into Colorado. Apparently, the farms scheduled their harvests so that the workers could go from one operation to the other. A New Mexico resident was arrested.

Thanks to the dog feces that masquerade as narcotics agents, who descend upon peaceful marijuana growers like a flock of rapacious vultures at dawn, it looks like it's going to be a long dry summer in these parts.

--Duke White



# NORML-IZE R

## A PRESCRIPTION FOR CHANGE

by Mary Lynn Mathre

Let's start with the word "drug." The pharmaceutical manufacturing companies have produced over 400,000 substances we call drugs for use in the US. Every year another 1,000 to 3,000 drug combinations will be added to this inventory. They will nearly all be blessed by the Federal Drug Administration and sold to the docs who will prescribe them to their patients, who will take them. Anywhere from 140,000 to 500,000 of those patients will die this year because of they ingested these drugs. With this many deaths from prescription drugs each year, could it be that the drug education in medical schools, the drug companies' research and the FDA's methods of approval are lacking? Yet we swallow these drugs, lots of us die and nobody notices.

On the other hand, there are the illegal drugs (approximately one illegal drug for every 600 legal ones). When Tom Brokaw starts a story about "drugs" or when the "drug czar" is quoted, it's the illegal drugs we hear about. The cameras roll, Donahue runs the aisles, "war" footage of LA is played with a talking head repeating the grim statistics of the streets. The truth is that about 5,200 folks died last year and will die again this year from illegal drugs. That's tens of thousands less than the score for the guys using prescription drugs.

Then there are the non-prescription drugs. Cigarettes are the big story here—350,000 dead each year. Alcohol also takes a toll in a big way—150,000 dead each year. Cigarettes, alcohol, prescription and over-the-counter drugs kill hundreds of thousands each year in this country, but it's okay—those people were using legal drugs.

Drug Bizarre Bennett was quoted recently as saying there's no difference between use and abuse when it comes to illegal drugs, the user is a criminal. Okay, Mr. Bennett, let's just take marijuana as an example. When a woman is going blind from glaucoma and uses marijuana to keep that from happening, according to you the woman is a criminal. A cancer patient who uses marijuana to control nausea caused by chemotherapy treatment is a criminal as well. A young man who smokes marijuana to control his spastic tremors—tremors so intense they propel him out of his wheelchair—is another one of your criminals.

Mr. Bennett, marijuana was declared illegal in this country 51 years ago at the urging of Harry Anslinger, a man who needed a job. The 10,000-year history of marijuana use by humans and the research of the last 50 years should have more credibility than the ravings of Anslinger. Bennett carries on in the tradition of Anslinger, and otherwise lies to avoid the truth: marijuana hasn't killed anyone. Ever.

All of this semantic confusion is repeated daily by major and minor players in the me-

dia, politics, the military and business. Urine testing is a prime example. Its purpose is to end drug abuse on the job. That's the hype, that's how it's packaged, that's the story. But it just doesn't happen that way. Urine testing for drugs doesn't show intoxication, it shows the use of any drug in a timeframe that doesn't prove job performance was impaired. But that information is not read, heard and reported. Instead we hear of percentages of accuracy or, more to the point, of inaccuracy, passing over the real story which is that these tests don't do what they are designed to do. But don't let this detail ruin your story, gang. Hell, it might make people take a second look at this new boogey-monster and realize that, like all else in the words of the drug war, there's just that little bit of information missing that makes the difference between what is and what isn't.



FLICK FORD

Most of those reading this magazine have had many encounters with words based on emotion rather than reality. A couple of years ago the governor of Oregon stated that marijuana use causes incest. The press reported this statement as though this politician knew what he was talking about. There was no gasp of disbelief on editorial pages, the AMA did not object, the president's drug advisor, Carlton Turner, did not correct the governor. Nope, it just got repeated all over the Northwest. A year later, Turner was fired for claiming marijuana use causes homosexuality. Maybe the reason Turner didn't step in to straighten out the Oregon governor is that they agreed.

From time to time in national magazines you may see Turner advertising his urine-testing company. There he is, smiling along with his partners, urging business to put on the brown shirts and sneak into their employees' private lives with a test that doesn't work. The sad part is that the magazines run the ads, our business leaders buy the tests

and those that cover this issue in the media still quote jerks like Turner.

Remember *Nightline's* four hour town meeting about "drugs"? It was a decent program, except for one big mistake in casting the inclusion of politicians as experts in an otherwise credible cast. The barren rhetoric of New York pols Ed Koch and Charles Rangel may be enough to impress some, yet nothing they said came across as expert on drugs. The usual tired lines about getting tough and waging war were repeated ad nauseum by these under-informed parrots of a bankrupt policy.

To be fair, some in the world of words have spoken out in protest of this lopsided approach. Art Linkletter, Bing Crosby, Barbara Walters, Hugh Downs and others have cried foul and asked for a reconsideration of our marijuana policy. But their cohorts just carry on with the same old mindset of the past—and that's just not good enough anymore. When a country spends five billion dollars a year to find, prosecute and jail those who are using a handful of illegal drugs, while 400,000 other drugs are virtually ignored, the same old line is nowhere near good enough.

How does anybody get a writer or editor on the *New York Times* or *Washington Post* staff to break with the party line and really look into the drug cartel of the US? How do Peter Jennings and his bosses decide what to say each evening about this convoluted issue? How do the producers of 60 Minutes decide what needs looking at? How can we convince them that marijuana and the other illegal drugs need to be evaluated by the same criteria by which this society judges Valium or Tylenol, convince them to report on the story using people that know what they are doing rather than the politicians and discredited piss testers? Who determines what gets said and how?

In essence the answer lies with us all. Every one of us who allows the present language used in our society to define drugs and their uses without challenge is at fault. NORML has consistently been at the forefront of such challenges over the past 19 years and will be there for as long as it takes. But NORML alone is not enough. You must be out there issuing your own challenges, demanding corrections of faulty data and invalid descriptions, holding local and national media personnel responsible for covering stories objectively and, above all, correcting your associates when they spread misinformation about marijuana and other illegal drugs.

That requires you to emerge from your smoker's closet and be properly informed. It requires that all of us realize that it's not quite as simple as, a legal drug is good and an illegal drug is bad. Keep this message with you and voice it: Drugs are not inherently good or bad. It's their manner of use that may be good or bad, responsible or irresponsible, educated or uneducated. ●



# OUTLAW NATION

## THE TERMS OF TERRORISM

by Ed Rosenthal

In elementary school they taught us about the Boston Tea Party. Angered by new British taxes, a highly militant radical fringe group disguised themselves as "Indians" and dumped the taxed cargo from a British ship. The British responded by closing the harbor until the cargo was paid for. History books call these radicals "patriots"; they are remembered as heroes.

If this happened today, the United States government would be the first to brand these freedom fighters "terrorists." These days, the designations "freedom fighters" and "terrorists" get turned around all the time.

Take South Africa, for example. Run by a clique of Dutch-descended whites, the government there denies the great majority of its citizens every human right—freedom of speech, right of assembly, right to own property, the rights to equal education, pay and social services. The black majority is treated as non-citizens. South African troops regularly kill protestors. At one demonstration, more than 2,000 unarmed, peaceful protestors were mowed down by police.

The African National Congress, originally a legally constituted non-violent organization established in 1910, had for years petitioned the South African government for re-

forms. But after being outlawed by the government in the '50s, the ANC was forced to go underground. In the '60s, the ANC began taking violent measures to oppose the repressive regime in South Africa. This group of brave freedom fighters are called "terrorists" by the US government.

The Israeli government is just as bad. Not only have they occupied Palestinian territories since 1968, but Israel does research in security techniques in cooperation with South Africa. Every day, Palestinians are being killed, maimed, exiled, dispossessed and humiliated in the West Bank and Gaza Strip. Freedom of expression is unheard of in the occupied territories. It's illegal to advocate a Palestinian state, display the Palestinian flag or even wear its colors. And forget about any critical publications. During the continuing uprising ("intifada"), Israeli troops regularly attack children. Basic services, like schools and health care, are purposefully kept at low levels. Nevertheless, the US continues to support Israel.

Even though the Palestine Liberation Organization is now fighting a largely diplomatic battle with Israel, they're still branded terrorists. When the PLO finally complied with Israel's demand that the organization, led by Yasser Arafat, recognize Israel's right to exist, Israel still refused to negotiate with the PLO.

Down in Central America, Nicaragua has

successfully fought off the US-backed mercenary army known as the Contras, who attempted to destroy the country's infrastructure—its public buildings, services, roads, schools, hospitals and industries. To Ronald Reagan and the US government, the Contras were "freedom fighters." Thanks to bad weather and the Contras' terrorist activities, Nicaragua's economy has become a total shambles. Still, the Nicaraguan government allows opposition, holds contested elections and is generally popular.

In contrast, Nicaragua's neighbor, El Salvador, is regularly cited for human rights violations. Its army has conducted numerous massacres in small villages and government-sanctioned hit squads hunt down members of the opposition—union leaders, politicians, even entrepreneurs who compete with businessmen with ties to the government. The US acknowledges the Salvadorian government's human rights abuses and has applied some pressure on the Salvadorians to clean up their act. But the US continues to provide El Salvador with tremendous amounts of military and economic aid.

Over the past 40 years, the US has supported one notorious dictator after another. Each of these fascists has enriched his family at the expense of his country's citizens, while doing everything possible to prevent freedom and democracy from being achieved. Yet these cold-blooded killers—terrorists through and through—have long received American support.

Call me old-fashioned, but I don't think Washington, Adams or Jefferson would have approved. ●

by Steve Bloom

Everybody's favorite Night Tripper, Dr. John, has a new album out, *In a Sentimental Mood*. It's full of standards and features a duet with Rickie Lee Jones on "Makin' Whoopee." This summer he's on tour with Ringo Starr. Dr. John has always had friends in "high places."

Matter of fact, in a recent interview, Dr. John (his real name is Malcolm John Michael Creux Rebennack, but his friends just call him Mac) spoke about his druggy past. He's been off methadone maintenance for four years now. It all began for the scratchy-throated Dr. John in his hometown of New Orleans in the '50s.

New Orleans was a pretty heavy scene," he says. "It was the first city in the 20th century that had a drug problem—from the lowest to the highest parts of society—and was first in the United States to have a drug treatment center, back in the '20s. Being a port city, drugs was pretty easily accessible when I started messing around with all that stuff. It pretty much surrounded me when I was coming up. A lot of my peers, my role models, was into it. I used to pay one of my guitar teachers with dope. It was a very blase scene. Nobody thought anything about it."

In 1968, Mac Rebennack adopted the nickname Dr. John the Night Tripper and released his first album, *Gris-Gris*, named for a nasty hoodoo potion that had been passed down through Creole culture. Though the record was plenty spacey, Dr. John says he wasn't trying to compete with San Francisco's psychedelic bands. "We were against the whole psychedelic scene," he explains. "Against guys like Timothy Leary telling people, 'Tune in, turn on, drop

## TRIPPING DOWN MEMORY LANE WITH DR. JOHN



out.' I just thought this guy was jive. I wanted to punch him out everytime I saw him. We might have been drug addicts, but we were against drugs. If you did it, fine, but don't talk about it."

"The first time we got to San Francisco, the Dead put us up in a house and my band freaked. There was a bowl with reefer on the table when we got to this house. My band, who all liked to smoke, threw it away be-

cause they thought we was gonna be visited by the narses any instant. Coming out of New Orleans, this whole thing was so strange. One guy quit the band. He couldn't handle how weird it all was. For a bunch of coon asses from Louisiana to come out to California in the '60s it was like culture shock and a half."

"We just didn't know where they was coming from. One of the frighteningest

## SUPREME COURT RAILROADS WORKERS

by C.R. Jones

In a June decision, the US Supreme Court gave railroads the power to urine-test workers for drugs. It was the Court's first ruling on the validity of drug testing by private employers.

The 7-2 decision--the opinion was written by Justice Harry Blackmun and opposed by Justices William Brennan and Thurgood Marshall--probably will not be applied broadly to other private employers. Based on an interpretation of the Federal Railway Labor Act, the ruling stated that testing is not a major change in work conditions and doesn't require collective bargaining.

The railroads' desire to test employees was sparked by the January 1987 collision of an Amtrak passenger train and a Conrail locomotive in New York. The accident killed 16 people and injured 174 others. A Conrail engineer and brakeman were later found to have smoked pot on the job.

On the same day the Supreme Court decision was handed down, the National Labor Relations Board maintained that private employers could not institute testing of union employees until union and management negotiate in collective bargaining sessions. However, the Board agreed that job applicants could be tested, since they are not yet union members. It is likely that the Supreme Court's decision will lead to an increase in the testing of applicants by private employers. ●

things--almost as frightening as crack today--was when I saw kids walking into walls. I saw some weird things early on, it scared me to no end. I had no idea what to make of people with acid back then. We were old-school, and that just didn't fit with what we was all about.

Today, Dr. John lives in New York, where crack has taken over the streets. The 48-year-old Doctor calls crack "probably the worst problem we've ever had. It really scares me when I see kids that's on crack. I can't knock everybody that's on it and I can't say that everybody's that's not on it is doing great either. I just try to stay out of this whole Just Say No concept. My past don't show me up as a good example. It's only by the grace of God that I'm here today. If I would go up and try to be a spokesman I'd really have to suss out what I was gonna say. I wouldn't get caught up in one of these things telling kids not to use drugs. That bothers me worse than not even saying nothing.

I don't feel that people that smoke pot is doing something horrendous. I feel that people doing crack are doing something dangerous. Like shooting heroin can be dangerous--with AIDS today, it's more dangerous than when I was doing it. On the other hand, people misuse prescription drugs, smoke pot on a social basis--who knows where something becomes addictive and who's addictive-type people? There's a lot of grey area.

Just like the grey areas in Dr. John's music. If *In a Sentimental Mood* is not quite your style, then look for the reissue of *Gumbo* on Alligator, his two piano albums on Clean Cuts and best of all, *Right Place, Wrong Time*, his hit album from 1974. ●

# HIGH-SCHOOL

## ECO-FASHIONING

by Lou Stathis

It's funny how the fashion world turns, eh? I'm not talking about trends in clothes or music, but the way socio-political issues seem to seize the public's media-fueled consciousness with predictable serial regularity. One minute, talk of the poisoned environment is on everyone's lips--the next, people are more interested in where Rob Lowe's thing has been, and all thought of the planet's imminent demise is forgotten.

Concern for the eco-system first sprang into prominence during the sincere '60s, when voguish youngsters were peer-pressured into exhibiting concern for just about everything (particularly if it involved the fucked-up condition our predecessors had left the world in). Much helpful legislation followed during the next decade's Nixon/Ford/Carter administrations: the creation and empowerment of the Environmental Protection Agency, emission control standards for automobiles, the Superfund toxic waste cleanup program, a heavily promoted (but, natch, underfunded) search for alternative fuel sources and so on. The cruelly mindless reign of Ronnie Feelgood that followed put an end to all that, reviving the idea that irresponsible, massive personal waste was okay. Whattaya say we lease out some of that underutilized public land to a paper company or two so we (they, actually) can make some dough off it. For eight years our government fiddled while the rainforests burned, and the once-ubiquitous word "ecology" almost disappeared from our collective vocabulary.

But, suddenly, the environment has become an active issue again, and politicians everywhere are, in the words of the British *New Scientist* magazine, "jumping on a moving train while trying to convince everyone they're driving it." Why this late-'80s ecology flip-flop? I'm pretty sure that the recent succession of well-publicized ecological disasters and fiascos has had a lot to do with it.

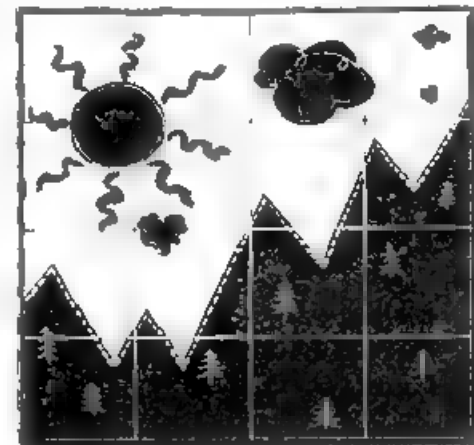
I'm thinking of such TV-friendly events as last summer's washing up of yucky medical wastes on NYC area beaches (nothing like the hint of AIDS to get panic going); the near comic yo-yo East Coast journey of the foul-smelling, piled-high "garbage barge" earlier in 1988; the realization by blue-collar homeowners in places like Calvert City, KY, and Times Beach, MO., that local industries had been using rivers, warehouses, empty lots and even the air as chemical dumps for years; virtually in these trusting peoples' backyards, and the vivid illustration provided by the Chernobyl melt-down of how someone else's carelessness can fuck up an entire continent. You can do all the wailing you want about the ozone hole, global warming and acid rain, but until people are confronted with either a direct inconvenience, a measurable diminishing of their quality of life or something that leeches

money from their pockets, they just won't give a damn.

Enter George Bush.

Either he or one of his manipulators smelled this growing eco-fear in the street last summer, and fashioned for the Prez's own fall collection/campaign wardrobe what had traditionally been a liberal-Democratic, anti-business suit of leisure wear (Bush is as much an environmentalist as Hitler was a Zionist.) And then in June, he tried to prove to us that he hadn't been jivin' by proposing to stiffen the Clean Air Act of 1970 (last messed with in '77, frozen since then by Reaganite indifference and Congressional butt-spreading for well-heeled industry lobbyists). What a joke.

As with his drug policy rhetoric, Bush likes to talk butch and trumpet what he'd have you believe are stringent, no-bullshit tough-guy demands. But once his noise dies down, he's revealed as the empty posturer we all know him to be. Sure, the Bushified Air Act mandates that cities meet new standards for ozone and carbon monoxide (auto smog) by the year 2000, but most of the cities cited don't even measure up to current requirements!



Now compare La La Land's no-fucking-around approach with Bush's plan, which includes a nasty little innovation sure to warm the hearts of profit-rich polluters everywhere: the buying and selling of polluting rights! In an arrangement similar to the way real estate developers buy and sell air rights in New York City (if your building is shorter than zoned maximum heights, you can sell your unused extra footage to the builder next door, who can then merrily add them to his monstrosity), polluters whose foul excreta quotients come in under Bush law guidelines can sell these safety margins to overpolluting operations, who can thereby continue to pour out their swill unrestrained. Cute, huh?

Contact your congresshuman about this. Word has it that before the revamped Clean Air Act makes it through the House and Senate it's going to be considerably toughened. You can make sure that happens by letting your representatives in Washington know what you think. ●



# QUICK FLASHES



## COKE WHORE?

Oliver North's secretary, Fawn Hall, admitted in June that she regularly used cocaine while working for the National Security Administration from 1985 to 1987. The DEA investigation, however, ruled out the possibility that Hall had also sold drugs.

## MONSTER PLANTS FROM RUSSIA

"Some plants are exhibiting gigantism," said the Soviet newspaper *Lenin's Banner* about vegetation near the Chernobyl nuclear power plant. Since the plant's disastrous 1986 explosion and fire, which leaked abnormally high levels of radiation into the air, tree buds have turned into leaves out of season and "giant green pines" are growing in the woods near the plant, the paper reported. However, the claim that rodents are running wild in the Chernobyl area was denied.

## THE ORIGINAL MUSHROOM MAN

Gregg Allman, lead singer of the reunited Allman Brothers Band, was recently asked if he still stood by the magic mushroom logo that has long been identified with the group. "The Stones have the lips, the Dead have the skull, we have the 'shroom," he said. Then Allman suggested that the interviewer turn the mushroom logo sideways. "It's a pussy, bro," he laughed. "Whenever they ask us about drugs, we just tell 'em to turn [the mushroom] sideways." Does he still do 'shrooms? "That was early in the game," Allman said. "You can take that old brain douche just so many times."

## MUSIKKA WINS MEDICAL MARIJUANA CASE

Elvy Musikka of Fort Lauderdale, Florida became the third person in the United States to win the right to receive marijuana legally for medical treatments. Federal officials approved the use of government-grown marijuana eight months after Musikka, 44, was arrested for growing pot in her backyard. She and her doctor argued the only way she could relieve her glaucoma is with marijuana. Musikka, who was already blind in her right eye, lost sight in her left eye while waiting for the approval. She will receive 300 joints a month.



## PLANTS FOR DIVORCE

Curious about her husband's secret activities, newlywed Mary Ellen Ecklund went outside the house and gazed into a window. She discovered an indoor grow room, complete with fluorescent lights, an odor-reducing machine and 50 pot plants. Ecklund took a snapshot, left their home in

Palm Harbor, FL and took off for North Carolina. When she phoned her husband a few hours later, Mary Ellen heard other women's voices in the background. Seething with jealousy, she called the police and turned in her husband of seven months. Moral of the story: The family that grows together, stays together.

## RICK LEACH UPDATE

The Texas Rangers' outfielder, Rick Leach, who was busted for pot possession in New York back in May, has improved his on-field hitting since then. Leach was batting .327 with one home run and 12 RBI by the end of June.

**\$28 MILLION**--An Air Jamaica jetliner was impounded by Customs officials in Miami after they found 3,595 pounds (nearly two tons) of marijuana on board. "You could smell it from 50 feet away," said Customs spokesperson Michael Sheehan. "We just cannot comprehend how the Jamaicans could not have discovered it, and allowed it to leave the country." Air Jamaica was ordered to pay a \$28.8 million fine. "Because of the number of times we've found drugs on Air Jamaica planes, we're determined to get a fair piece of that money," Sheehan said. Since October 1980, Customs has seized a total of almost 18,000 pounds of marijuana on various Air Jamaica aircraft.

## NON-TOXIC BUG BEATERS

Biological pesticides are gaining wider acceptance by American farmers. The number of biological products approved for the market has doubled from 21 to 42 since 1981, according to the Environmental Protection Agency, and total sales of biological bug removers could top the \$50 million mark this year. This is good news for environmentalists, as is the decline in sales of chemical pesticides from 1.4 billion pounds in '81 to 910 million pounds in '87. Other experiments in non-chemical pest control include tomato plants developed by the Monsanto Company that have been genetically altered to resist caterpillars.

## GROWING UP

US marijuana growers expanded their production by 38 percent last year. The US and Mexico are tied as the second largest pot producing country. Colombia is still ranked No. 1. ●



## SORRY, WRONG PARTY

Police and a shotgun-toting SWAT team burst into the home of suspected drug users in Villa Rica, GA and found a party going on. They ordered the suspected druggies to lie on the floor and pointed their guns at them. Fifteen minutes after the raid, the police were apologizing profusely. The party was actually a pre-wedding

gathering hosted by Lillie Haynes for her daughter, who was getting married the next day. "We made a mistake," Villa Rica City Manager Robert Barr admitted after the raid. "I don't know what more we can do." Lillie Haynes has had problems sleeping ever since. "We're going to remember that for as long as we live," she said.

# TRANS-HIGH LIQUOTATIONS MARKET

Send quotations to: THMQ, 211 E. 43rd Street, New York, NY 10017. THMQ is intended solely for informational purposes. All entries should be typed or neatly handwritten. If you are unable to compose a legible entry after testing your samples, please wait until you regain control of your penmanship before sending us your information. Marijuana is listed by 1/4-ounce, ounce, 1/4-pound, and pound prices only. Don't bother sending prices for hard drugs. Prices in this issue are current as of June 19, 1989. Please note: THMQ is NOT a mail-order service. Don't bother trying to order items which appear in THMQ from the HIGH TIMES office.

**Anchorage, AK**  
Skunk #1 "the kill" grown indoors, just across town \$65 1/4-oz; \$650 1/4-lb  
Matanuska thunderfuck "hard to get a hold of the real thing" \$65 1/4-oz \$210 oz  
*Indica/sativa* "various types around," \$60-70 1/4-oz. \$90-210 oz \$600 1-lb

**Birmingham, AL**  
Brown dirt weed "gotta smoke all day long to get a buzz," \$25 1/4-oz  
Southern green bud "big lime green buds," \$40 1/4-oz  
Florida sinse buds "okay buzz, but not long enough to last through an hour of couch potato-ing" \$35 1/4-oz  
Cocaine "the blizzard has hit," \$100 gm  
LSD "visual orgasm," \$3-5 a hit

**Colorado Springs, CO**  
Killer closet clones "for those in the know" \$35 1/4-oz \$120 oz  
Local outdoor sinse "few seeds; plentiful great taste and high," \$40 1/4-oz \$120 oz \$325 1/4-lb  
Colombian brown "many seeds; much shake will get you buzzed," \$35 1/4-oz; \$120 oz; \$800 lb  
Shrooms "colors to the max, all night trip," \$7 gm; \$35 1/4-oz  
Hash "dark brown; scarce will definitely knock you on your ass," \$7.8 gm

**Greeley, CO**  
Skunk #1 "from a buddy's basement," \$50 1/4-oz  
Commercial "for dumbasses," \$25-30 1/4-oz  
LSD "still a few sugar cubes left from the tour" \$2-3 a hit \$50-60 a vial

**Norwich, CT**  
Green buds "lots of red hairs," \$50 1/4-oz  
Skunk weed "killer," \$50 1/4-oz  
Mega brown "real killer two hits and your mind is blown," \$60 1/4-oz

**Newark, DE**  
Jamaican lamb's bread orange hairs; makes you sleepy good counts," \$40 1/4-oz \$200 oz  
Skunk bud "ridiculous prices, but oh, baby! smoked two tiny bowls with two other dudes and got wiffed!" \$60 1/4-oz

**Roxa, FL**  
Green bud "smells and looks better than it is gives a good buzz though few seeds" \$30 1/4-oz  
Cinnamon bud "smells like cinnamon, green buds

with a touch of red knocks you on your ass from laughing so hard," \$35 1/4-oz  
LSD: Porky Pigs "double-dipped with a little vitamin C" just sit back and enjoy the ride \$5 a hit

**Kort Lauderdale, FL**  
Skunk "quick, jolly good fun" \$50 1/4-oz  
Plain Jane "cheap, easy to get, gives you a headache" \$35 1/4-oz \$100-120 oz  
Hash "a rip off this shit is seven years old," \$10 gm  
Krypto "the word for sinse is here, comes from outer space," \$75 1/4-oz  
LSD: test tubes, pigs, dolphins "all about the same quality, stops the world" \$5-7 a hit

**Miami, FL**  
Commercial "slut weed not even worth trying" \$25 1/4-oz  
Green big-buzz bud "nice big buds, good taste and high: too many seeds though," \$30 1/4-oz \$100 oz  
Jamaican sinse "creepy high; halfway down the joint you realize you're ripped," \$35 1/4-oz \$100 oz  
Mexican red hair "looks great, smokes great, really spicy high" \$40 1/4-oz \$120 oz  
Skunk "heavenly smoke full of resin; too good to burn in joints, a clean bong is a must" \$45-50 1/4-oz  
Krypto buds "when you can find it, it's the best broccolus sized buds pungent pine aroma; huge crystals: one bong hit and you're nowhere near earth—your retina is mangled!" \$80-100 1/4-oz

LSD "hard as unicorn's stars" had to find inconsistent quality; if you're lucky, you wind up laughing for six hours and riding the steychirne down for four" \$5 a hit  
**Tallahassee, FL**  
Commercial "Mexican hash, but a heavy same" \$30 1/4-oz \$100-110 oz \$360 1/4-lb \$1200 lb  
Indoor *sativa* "beautiful big buds, H1 centerfold material" \$60 1/4-oz \$175 oz  
LSD "clinical whites, very limited supply," \$3 a hit \$150-200 a sheet

**Vero Beach, FL**  
Skunk bud "hard to find; must have car worth the wait" \$35-45 1/4-oz

Miler weed "sold at a local dime store pretty seedy but stoney" \$10 a bag  
Hemp "the only way to go," \$40 1/4-oz  
Okeshobee purple "a rarity, too expensive possibly a scam," \$50-60 1/4-oz

**Chicago, IL**  
Local grower green buds "very dry, but one hell of a buzz" \$35-45 1/4-oz  
Sinse "a little overpriced alright buzz," \$30 1/4-oz  
Hawaiian "mind-numbing buzz, the best" \$325 for a one oz coffee can  
Skunk "the best dope in the price range" \$35 1/4-oz

Shrooms "almost acid like, incredible" \$35 1/4-oz  
LSD: rainbow gel "has taken Chicago by storm the best trip I've ever had," \$4 a hit  
LSD: lucky numbers "the same acid as the rainbow gel, only in blotter form taste" \$4 a hit

**Monmouth, IL**  
Commercial Mexican "gok, but we need something new" \$35-40 1/4-oz \$400 1-lb  
Commercial Colombian "very seedy," \$40 1/4-oz \$400 1/4-lb  
Shrooms "from Alabama send some more" \$40 1/4-oz  
LSD: Spider Webb designs, unicorns "where's all the microdot?" \$4-5 a hit

**Orlando Park, IL**  
Canned Hawaiian seedless, sticky, sweet lime green" \$75 1/4-oz \$300 oz  
Skunk #1 X Northern Lights "personally grown; huge dripping stinking buds, just harvested," \$150 oz \$500 1/4-lb  
Compressed seedless Mexican "very red, but

harsh, better than average good high," \$35 1/4-oz \$350 1/4-lb  
Pug bud "commercial weed; sometimes good, sometimes not," \$30 1/4-oz; \$275 1/4-lb  
Shrooms "big caps, blue stems," \$30 1/4-oz \$100 1/4-oz \$350 1/4-lb

LSD: Pull the Magic Dragon "fresh and intense" \$3-5 a hit  
**Westmont, IL**  
Volcano sinse "mell w buds" \$35 1/4-oz \$140 oz  
Skunk buds "smells and tastes great," \$50 1/4-oz \$150 oz  
Commercial sinse "everyday normal high," \$35 1/4-oz \$110 oz \$340 1/4-lb  
Shrooms "natural trip; all you need is a gram" \$6 gm; \$50 1/4-oz  
LSD: musical notes "lots of visuals," \$3 a hit \$165 a sheet

**Shawnee, KS**  
Indica "strong skunk sinse, break out the scissors, green and red nugget buds, dripping with resin, like leather" \$60 1/4-oz  
LSD: liquid "makes your friends melt" \$5 for two drops on a sugarcube  
Mexican "few seeds worth it always around," \$30 1/4-oz \$100 oz

**Wichita, KS**  
Kansas closet weed "the old standby good stuff everywhere," \$35 1/4-oz  
Ind an tinfo smoke *sativa* variety "delivered wet and frozen, thick sweet taste, one hit and colors abound," \$50 1/4-oz  
Mangol an "asterfuck one bong hit and you age three years, great for parades, bowing tournaments, sex, and Italian food, hard to find" \$45 1/4-oz  
Skunk #1 "grown from

imported stock, don't mess with this stuff—it will kick your ass!" \$60 1/4-oz

**Caneville, KY**  
LSD: double diamond blotter "the walls breathe, allnighter!" \$5-6 a hit  
LSD: white blotter "speedy high cartoon time!" \$4-5 a hit  
Bonde hair sinse "stoned to the bone; shifty deals though," \$45 1/4-oz  
Indoor buds "green and wet" \$35 1/4-oz

**Louisville, KY**  
Skunk #1 "indoor hydro grown, we call it to-fu-three hits and you're too full for connoisseurs only," \$50 1/4-oz, \$175 oz  
Afghan "third generation, we call it the wheelchair—three hits and you're crapped from the brain down," \$50 1/4-oz; \$175 oz  
William's Wonder "we call it silly Willie, four people could not finish one joint (or hogleg)," \$50 1/4-oz \$175 oz

**Alexandria, LA**  
Commercial \$25-35 1/4-oz  
Mexican "the usual," \$30 1/4-oz  
Homegrown \$10-15 1/4-oz

**Detroit, MI**  
Hawaiian hydro "grown with organic tea mix and Budswell, all day delight, the best," \$60 1/4-oz  
Skunk #1 "pineapple taste, must be organic nutrients," \$70 1/4-oz  
California orange "sixth generation clones; no import can compare," \$280 oz  
Mexican dirtweed "don't waste your money" \$45 1/4-oz

**Hamazon, MI**  
Dark green "orange haired sinse, nice buzz, no burnout, worth the cash," \$40 1/4-oz  
Green bud "local delight, nice work, Farmer Ted," \$45-50 1/4-oz  
LSD: frogs "rabbit, rabbit, all I said for four hours, Ken Kesey would be proud!" \$4 a hit  
Shrooms "rare; munch while they last," \$45 1/4-oz  
Brown Mexican "dutchweed; nasty taste, bad high" \$35 1/4-oz

**Mt. Pleasant, MI**  
Mexican \$35 1/4-oz  
Golden Thai \$40 1/4-oz  
Back hash \$10 gm  
LSD: yellow blotter \$5 a hit  
Colombian brown dirtweed \$25 1/4-oz

William's Wonder "the best shit around," \$40 1/4-oz

**Cherry Hill, NJ**  
Killer skunk "light green buds, few seeds; most of the time the price is bad, though," \$280 1/4-lb  
Sinse "okay, shakey, does the job," \$35-45 1/4-oz  
Shrooms "killer; gets you off nicely," \$40-50 1/4-oz  
Mild skunk "lots of shake nice flavor gets you," \$45-50 1/4-oz  
Red bud "exotic; good taste; gets you off nicely fries your brain" \$50-70 1/4-oz  
Shrooms "big juicy stems; killer effects," \$40-50 1/4-oz \$120-140 oz

**Parlin, NJ**  
Humboldt County *indica/sativa* sinse "a little old, but still ass-kicking" \$75 1/4-oz \$300 oz  
Hawaiian *sativa* sinse "grade A *sativa* at its best," \$80 1/4-oz \$300-325 oz  
NJ William's Wonder "strongest THC content of all indicas," \$70 1/4-oz  
Arkansas *indica/sativa* hybrid "heavy indica taste, but with a soaring *sativa* high; excellent value!" \$60 1/4-oz \$200 1/4-lb; \$1900 lb  
Indonesian *sativa* "kilo-size square blocks of old, dark brown, dry mold weed, kinda like early '80s Colombian dirt pot" \$400 1/4-lb; \$1400 lb  
Mexican semi-sinse *sativa* "real wet texture; moldy smell, getting worse and worse," \$1375 lb  
LSD: airplanes "excellent clean trip; Dead show acid from Ohio," \$3-5 a hit

**Sumter, SC**  
Kentucky sinse "kiss, big buds, orange hairs," \$120 oz; \$385 1/4-lb  
Brown/green local grown "dirt weed, weak, poor bags; mediocre buzz, better luck next year" \$100 oz \$350 1/4-lb  
Skunk bud "decent; good buzz; plenty around, but bags are skimpy; lots of seeds and stems," \$40 1/4-oz, \$110 oz  
Brown dirtweed from NC; slow but lasting buzz same stuff as last year" \$40 1/4-oz, \$100 oz

**Nashville, TN**  
Green Mexican "average quality plentiful" \$40 1/4-oz \$325 1/4-lb  
Jamaican "packed hard as a rock; green stuff is good, but stay away from the brown," \$40 1/4-oz \$140 oz



# TAKE THE BEST **LIVING SYSTEM** FORGET THE REST

**Living System** is more than just a growing apparatus. It is a scientifically proven approach to horticulture so fool-proof even first time users will achieve guaranteed minimum yields. But most important is that many customers nationwide over the past six years continue to enjoy the benefits of lush indoor gardens all year round. They report greater yields and higher quality in less time. Bottom line is quicker return on time and investment. See why more and more indoor growers are taking their needs to **Light Mfg. Co.**

## Suncircles

- 1 Light System 8 x 8 room 139.95
- 2 Light System 10 x 10 room 189.95
- 3 Light System 12 x 12 room 249.95

## Lighting

- 100w Meta Halide w parabolic reflector 189.95
- 1000w HPS w parabolic reflector 259.95
- 400w Meta Halide w 2 cone reflector 149.95
- 1" w Meta Halide or 150w HPS min horizontal light 109.95

## Living Systems

- Basic System includes Heart, six 6 cell and Nutrient Supply Center 161.00
- Expandable to 72 cells with 6 12 and 18 cell kits
- Six 6 cell access kit includes pump timer nutrients pH up pH down pH adjustment dispenser bloom builder rockwool and pH test kit 117.60
- Basic System and Access Kit 264.49
- Twelve 12 cell system with accessory kit 342.30
- Thirty six 36 cell system with accessory kit 659.90
- Sixty 60 cell system with accessory kit 999.95

All Systems and access kits are discounted 5% when purchased together.

## CLOSET SYSTEM

- Six 6 cell Closet system expands to Living System with Heart and Nutrient Supply Center. Includes pump timer nutrients pH down rockwool 6 Living System cells 149.90
- Ten 10 cell Closet Nursery includes 10 Living System growth modules pump timer nutrients pH down rockwool test kit reservoir tray 169.90
- Closet system with min horizontal 274.90

## CREATE YOUR OWN CUSTOM SYSTEM

- All Living System components accessories and parts may be purchased separately for those who wish to create their own custom experimental growing system.

## FREE PHONE CONSULTATION

- Free free to call us at 503-231-1582 with your indoor growing questions. One of our experienced consultants will gladly assist you. Visit our showroom today for a demonstration of our continuous production system and a look at our line of horticultural products.

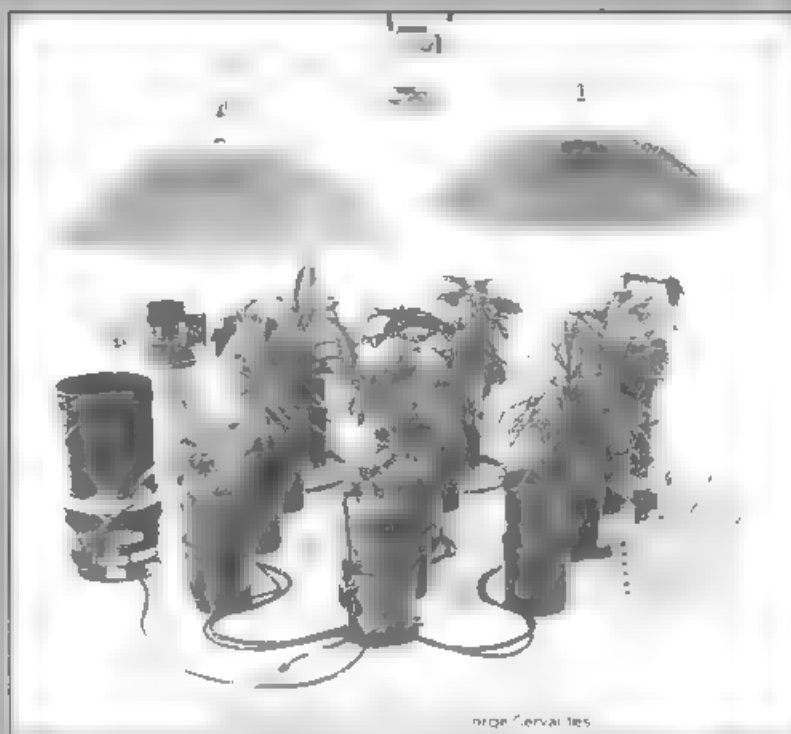
## SAME DAY SHIPPING SERVICE

MasterCard  
VISA AmExp



FREE  
CATALOG

## DEALER INQUIRIES WELCOME



## CELL

- Individual and interchangeable growth modules shut off clamp with easy disconnect \$11.00

## HEART

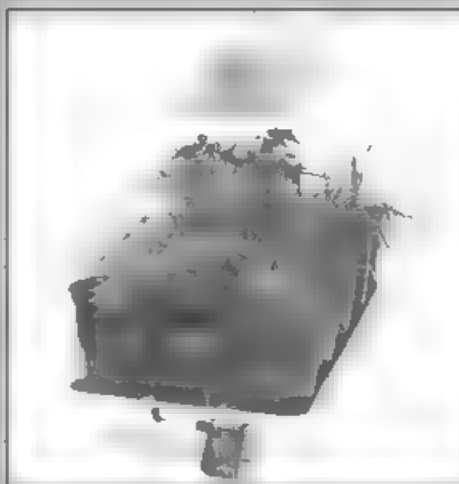
- Adjustable nutrient flow automatic flush and drain total nutrient recirculation \$55.00

## NUTRIENT SUPPLY CENTER

- Five gallon mixing reservoir nutrient level regulation reservoir expansion port \$50.00

## CO<sub>2</sub> INJECTION SYSTEM

- Complete with timer and instructions 149.90



## ELIMINATE GUESSWORK

Follow our recommendations with precision by using our Professional Parts Per Million (PPM) Meter with padded case and standard solution to monitor nutrient concentration for only \$179.00. And our electronic pH Pen with standard solution to check system pH for only \$54.90.

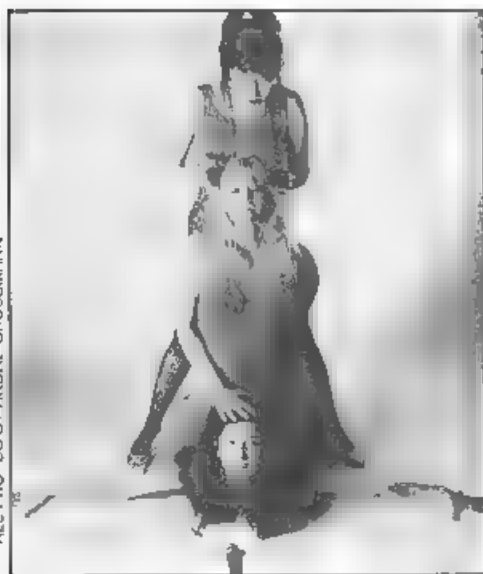
Free estimates given on complete systems including Lights timers fans CO<sub>2</sub> nutrients pH adjustment reflectors mylar, and rockwool.

## 30 DAY MONEY BACK GUARANTEE

**CALL NOW TOLL FREE AT 1-800-NOW-LITE**

Light Manufacturing Company 1634 S.E. Brooklyn, Portland, OR 97202

## D.C. SMOKE-IN



*The Assassinettes: Abbey, Lucy, and Kimona 117.*



*Flick Ford, lead singer of the Soul Assassins, demonstrates his stage technique during a bus breakdown.*



*Dreddy Duck, the new HIGH TIMES mascot.*

*continued from page 19*

the adverse conditions," says DeAngelo. "The crowd at Lafayette Park was the largest we've had since the '70s. If it hadn't rained, I think we might have had 20,000 people at the free concert."

Another NORML benefit concert is scheduled to take place in Washington on September 23rd. ●

# JORGE CERVANTES

## TESTED AND APPROVED

# INDOOR GARDENING

- SYSTEMS
- COMPONENTS
- ACCESSORIES

- SPECIALIZING IN
- GROW LIGHTS
- DUTCH EBB & FLOW

- QUALITY PRODUCTS
- LOW PRICES
- FAST SERVICE

THE LIGHT HOUSE  
8331 SE 17TH AVE  
PORTLAND, OR 97202

CALL NOW FOR

**FREE CATALOG 1-800-327-8805**

VISA • MASTERCARD

SUPER SATIVA  
SEED CLUB

THE MARIJUANA  
SEED CATALOG

SUPER SATIVA  
SEED CLUB

The  
Dutch  
Professionals

**SUPER SATIVA  
SEED CLUB**



**EXOTIC SEEDS FROM  
AMSTERDAM**

**FREE**

**THE MARIJUANA SEED CATALOG**

**33 COLOR PICTURES**

**TOP QUALITY MARIJUANA SEEDS: INDICA'S, SATIVA'S  
AND HYBRIDS**

**U.S.-TOPSTRAINS AND EXOTICS**

**CAREFULLY BRED FOR INDOOR AND OUTDOOR  
GROWING**

**MARIJUANA SEED BREEDING AND PRODUCING  
IS OUR PROFESSION**

☐ YES! PLEASE SEND ME A FREE  
COPY OF THE MARIJUANA  
SEED CATALOG

NAME .....  
ADDRESS .....  
TOWN .....  
STATE/ZIP ....  
SEND VIA AIRMAIL TO  
S.S.C. - POSTBUS 1942  
1000 BX AMSTERDAM - HOLLAND  
DISCRETION ASSURED.

A N E W A G E S E R V I C E



**East of the Mississippi  
there really is only one source  
for quality growing supplies.**



## **WORM'S WAY**

**Organic Indoor/Outdoor  
Garden Supply**

### **GROW LIGHTS & ACCESSORIES**

Hydrofarm™ Horizontals

Metal Halide 1000w/400w/175w

High Pressure Sodium 1000w/400w/150w

Sun Circle

Lite Track—New & Improved!

Conversion Lamps—Halide to HPS

**CLIMATE CONTROL EQUIPMENT**

**CO, INJECTORS & GENERATORS**

**TESTING EQUIPMENT**

### **HYDROPONIC SYSTEMS**

Hydrofarm Quantum™ Systems

Hydrofarm Solo™

### **EBB & FLOW TABLES**

Gro Master™ (a Dutch favorite!)

Flo Magic Bed Inserts

### **PROPAGATION SUPPLIES**

Grodan Rockwool

Cloning Kits

### **IRRIGATION EQUIPMENT**

### **FERTILIZERS**

Worm Castings—Eco-Grow™—Dyna Gro™—Original Dutch Formula—Hydrofarm™  
and

*The Most Complete Selection of Bat and Bird Guanos Available Anywhere!*

### **INDIANA**

4620 South State Road 446  
Bloomington, IN 47401  
(812) 837-9901

**NOW OPEN!!**  
**MASSACHUSETTS**  
Worcester, MA 01607  
(508) 797-1156

### **FLORIDA**

5311 56th Commerce Park Blvd.  
Tampa, FL 33610  
(813) 621-1792

**AUTHORIZED**



**DEALER**

To Place an Order or Request Your FREE Catalog, call

**1-800-274-WORM (9676)**

For questions or advice, please call the store nearest you.

**ANNOUNCING**  
EASTERN U.S. DISTRIBUTOR FOR  
Simeon's Organic Plant Foods  
Dealer Inquiries Invited



Howdy, pardners! Out here on the Cross Breed Ranch, when I'm not busy workin' on my harvest, I ride high in the saddle with the latest copy of **HIGH TIMES**. It's got the best tips on plantin' and growin', plus news, tunes and comix! And I don't have to worry about no revenuers beatin' on my door, because the **HIGH TIMES** subscription list is totally confidential! So don't miss out on any **HIGH TIMES**, pilgrim...subscribe today!

**CALL TOLL FREE  
FOR ORDERS ONLY**

800-435-0715

In Ill. 800-892-0753



☐ Payment enclosed  
☐ MasterCard ☐ Visa

Card # \_\_\_\_\_

Expiration date \_\_\_\_\_

Signature \_\_\_\_\_

**UNITED STATES**

☐ 1 YEAR \$29.95  
☐ 2 YEARS \$54.95

**CANADA & FOREIGN**

☐ 1 YEAR \$37.45  
☐ 2 YEARS \$68.95

**HIGH TIMES  
SUBSCRIPTIONS**  
P.O. BOX 410  
MT. MORRIS, IL 61054

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

PLEASE PAY IN U.S. FUNDS—ALLOW 6-8 WEEKS FOR DELIVERY.



# THE

# STEPS

# TO

# LEGALIZATION

## Petition Your Government for a Redress of Grievances

by Ed Rosenthal

For a long time, activists have been waiting for NORML to start a political legalization drive. Years ago, California NORML had a functional organization. However, currently it's in the hands of a Board of Directors who combine the worst qualities; uncreative amateurs who have only a marginal interest in the issue. Activists such as Dennis Peron, Jack Herer and Dr. Todd Mikuriya are consistently barred from any policy-making role. The president of the local, Dale Geringer, complains about the Board, but for the most part appreciates their hands-off approach to his administration.

In March and April, several pieces of regressive legislation were proposed to the California State Senate and Assembly. One bill would have made it a separate criminal offense to possess any amount of marijuana in three separate packages suitable for sale. For instance, three joints or three containers of seeds. Another bill would have made it a crime to solicit to buy pot.

The third bill, which had versions in both legislative houses, would have limited diversion to growers captured with ten plants or less. In California, diversion is a judicial process for people caught possessing or cultivating marijuana for their own use. Instead of going through the court process, the charges are waived as long as the person stays out of trouble for two

years. The court decides eligibility based on a preponderance of evidence. This law has saved California's taxpayers millions of dollars since its enactment, and has saved thousands of Californians the heartache of judicial proceedings and their aftermath.

As the Senate bills began coming up for a vote, Dale became desperate. He could not get to the capital because of medical reasons, and the Board members who were suitable for legislative duty were either busy or uninterested. As a result, Dale asked me to see what I could do.

to Sacramento.

The bills were scheduled to come to committee at 1 P.M. I arrived in the hallowed halls at 9 A.M. and immediately started lobbying. I never got to see any legislators, but talked at length with a number of their aides. The first ones I went to see were those who I thought would be opposed to the bills. They were courteous, concerned about the issues, and very helpful in their comments.

Next I went to see the aides of legislators likely to be in favor of the bills. They too were courteous and engaged in frank discussions of the bills and the marijuana issue in

*"I envision an army of lobbyists first descending on the state governments and then the federal government. And I mean YOU. Everyone can do it. Simply by reading HIGH TIMES, you can be an effective citizen-lobbyist."*

First I called up the legislative analyst of the bill and spoke with him at length. (A legislative analyst describes a bill and guesses at its effects on government and society.) He asked me to write a statement about the proposals and let me know how to register to speak before the legislature. He also gave me advice on procedure.

The analyst asked me to write a statement about the measure and my opinion of its effects. I sent this out to him promptly. Then, searching the back of my closet, I found a serviceable suit, tie, white shirt, and shoes, and made the drive

general. I was surprised by their willingness to participate in give-and-take conversations.

The discussions with the aides were good practice for speaking before the Senators. First the proponent of the bill spoke. Then came representatives of the police, attorney general's office, and the CAMP people.

Representatives of the California Criminal Lawyers Association and the ACLU spoke against the bill. A concerned NORML lawyer, Bob Cogan, also opposed them.

The bills were fatally flawed and as the speakers discussed them, it became apparent that

they would not make it out of committee. All were withdrawn. Three weeks later, the same thing happened in Assembly.

For the most part, I found the legislators abysmally ignorant about the subject of marijuana. Usually they're led around by the state attorney general, the police, and "parent's groups" because nobody else speaks up on the issue. Once legislators become more informed, their attitudes loosen up a bit. With concerted work, their votes can be changed.

These experiences have convinced me that continual lobbying efforts in the state

The anti-pot groups have had a field day for years. They have faced no opposition in the government and media and have been able to deal in hysterics. Now you can help cut short their non-joyride. We need thousands of people to talk until their throats are dry.

I envision an army of lobbyists first descending on the state governments then the federal government. And I mean YOU. Everyone can do it. Simply by reading HIGH TIMES, you can be an effective citizen-lobbyist.

In order to approach the government most effectively,

*"For the most part, I found the legislators abysmally ignorant about the subject of marijuana. Usually they're led around by the state attorney general, the police, and 'parent's groups' because nobody else speaks up on the issue."*

legislatures could change the marijuana laws very rapidly. Prohibition is a model. In the spring of 1932, Roosevelt was opposed to a "wet" plank because he thought it would lose him votes. Within a few months, public opinion had turned. The corruption, killings, and lack of liquor made the public disgusted. Roosevelt won not only on anti-Hoover depression votes, but also because of the promise to repeal the 18th Amendment. If that history is too ancient, remember that in 1980 Reagan won partly on an anti-Commie plank. Now the Russians are our best friends.

you have to sort of play their game. Here are some rules and pointers for talking with elected government officials and their aides.

1) Everyone at the legislature is dressed in business clothes. In most legislatures, this means suits or work dresses. Attempting to approach these people in jeans makes their eyes glaze over. I know that this is going to turn a lot of people off, but dress and grooming are important. It's a signal to them that you are ready to talk the same language.

On the other hand, legislators usually have office days in their

local office. You can go visit them there to voice your concerns. These meetings are usually more informal than the ones in the capital. However, going up to the capital emphasizes the "importance" of the issue.

2) Rehearse your arguments so that you know them by heart, and do not have to think about them when you are talking with the representatives.

3) Listen to what they have to say and do not interrupt. Once they have made their argument or asked their question, then answer it or make your rebuttal.

4) Try to de-polarize the issue by first talking about what you agree on. When I was talking to conservatives, I started the discussion by bringing up some areas on which I knew we'd see eye to eye: "There is a tremendous drug problem that is out of control"; "Cocaine, especially crack, is the most dangerous drug around to both society and the people who use it," or "The government has limited resources, and they should be used where they will do the most good."

5) Talk in sound bytes. Legislators have a limited attention span. Instead of hearing the whole build-up of an argument, they would prefer a chunk, preferably no longer than 18 seconds.

6) Don't make an ass out of yourself by blowing up or getting mad if things don't go your way. The marijuana laws were not made in a day, and they won't go away in a day. Fighting marijuana laws is a long-term effort.

7) Any comments made about



# Interview: Cindy Ornstein

## "Horrible, Rotten Things"



by John Holmstrom

Cindy Ornstein became an overnight celebrity when she was arrested with Tom Forcade and accused of trying to blow up President Nixon at the Republican Convention in 1972. The FBI wasn't the only organization accusing Tom Forcade of high treason. The counterculture itself divided into two factions--pro- and anti-Forcade, as he led the new guard Zippies (Zeitgeist International Party), against the old guard Yippies (Youth International Party). Shortly after the firebomb charges were dropped, Tom and Cindy went to work on the first issue of *HIGH TIMES*. Currently, Cindy works for a major telecommunications network.

This is the final interview of a series that ran from July 1988 to this issue to mark the 15th anniversary of *HIGH TIMES* and celebrate the endurance of the counterculture. We hope you have enjoyed them. Next month, our 15th anniversary issue will run a chronicle of Tom Forcade's adventures.

**HIGH TIMES:** Some people say Tom was paranoid, others say he just knew the truth.

**Cindy Ornstein:** I don't know if it was paranoia. The guy was on the cutting edge. He was being watched by the FBI and God knows who. There were a lot of undercover people around. You didn't know who your friends were. If anybody was a target it would be Tom, as evidenced by what they did to us in Miami, when FBI agents framed us and we faced 26 years in jail.

I think the most important thing about Miami is the story about Abbie and Jerry. Abbie and Jerry were writing a book for Warner Brothers, the Kinney corporation, called *Vote!*, and they sent home anybody who came down to demonstrate. We didn't want to be associated with the Yippies. Abbie and Jerry were parading around under that name, writing that book, and telling people to go home, so we started the Zippies, because we were down there to demonstrate. That was our sole purpose.

**HT:** How did you get arrested for firebombs?

**CO:** We had a rock band called the Gooks. Jane Fonda spit in the lead singer's face because she didn't want rock music performed while Dave Dellinger was speaking down the block.

**HT:** How did Jane Fonda get mixed up with the Zippies?

**HT:** She was there to demonstrate. She wasn't with us. Apparently, Dave Dellinger was down there talking, and there were a lot of speeches against Vietnam. She didn't want our music to drown him out. She said it was horrible, she didn't know what we were doing. We were setting up for *Eat The Rich*, an anti-war rock opera. We pulled up in front of the Convention Hall in a flat-bed truck the night of Nixon's nomination. The undercover cops who were tailing us planted firebombs on the truck along with all the equipment. I was holding a handmade candle in a tuna-fish can, which I was using as an ashtray.

**HT:** So they said you were lighting a firebomb with a can of tuna-fish?

**CO:** No, this was part of the evidence. They claimed it was one of the firebombs that Tom and I intended to blow Nixon up with.

**HT:** They planted two bombs on you?

**CO:** They planted them in the back of the truck with the generator and all the rock equipment--two firebombs. The reason that he and I got off the charges was the firebombs that the FBI chemist planted were technically not firebombs. They gave the chemist an additional three hours to go back before the verdict to prove that these were firebombs, and the judge, who happened to be Nixon's ex-campaign manager, said, "I'd love to send these people to jail, but this is like having a gun without a barrel. These are not firearms, they're camp flares." Had they put real firebombs on the truck, Tom and I would be in jail still.

Also, during that summer, Abbie put out word that Tom was a heroin addict. He put out a poster, and he got on *BAI* later, and said Tom and I were dealing heroin. They did some horrible, rotten things, our good friends, Abbie and Jerry.

After that summer, Tom and I lived in a farmhouse, hiding out in Florida. We figured there would probably be some arrests after this summer. That's where *HIGH TIMES* was conceived.

**HT:** When did he think of the idea?

**CO:** He was talking about it in late '72. I wanted to do a book about Miami--I still



wish it had been written--and he said no, he wanted to put the money into the magazine and producing the Gooks, which never went anywhere.

**HT:** What was your job?

**CO:** I was everything. I was running the office, selling ads, and helping Tom. It was fun but it wasn't profitable.

**HT:** What kind of wild and crazy things happened back then?

**CO:** I remember one winter we were sitting there, and Tom allegedly had a shotgun linked to his office door, so if you went into his office... I think this was a rumor, because I never got shot. If you went in his door without knocking, a shotgun was on a string, and it would blow you away. Diana, the art director's, art table was right in direct fire from the door. She was nervous. Anyhow, one day, in the dead of winter, the super walked in and announced that the heat is on. We packed our stuff up and headed out the back door. We thought he meant the cops were coming.

**HT:** Why did you leave *HIGH TIMES*?

**CO:** One of the reasons I left was an ad policy issue. One of the advertisers was selling marijuana t-shirts and wanted to sell the ad on sex. He had a very busty woman put the t-shirt on, shoot it, and sell it with the logo sunk in the cleavage. You couldn't see the product. I said, "Tom, it's very nice she has breasts, but you can't see the product. No one is going to buy the shirt." We had a big fight, and I walked out.

**HT:** How was the cover of the first issue conceived?

**CO:** The paper texture and the colors were my idea. First of all, I think silver and turquoise are beautiful, and I thought we needed a good cover to clean marijuana on.

**HT:** I heard the magazine came together very soon after Tom thought of how to do it.

**CO:** Tom did things fast. He did it while he was inspired, and got things going and got the money together and the people to do it, and his timing was good. He had a good sense of what was happening, even though Tom never had commercial taste. He was always very political and outrageous.

He did get bored easily. He would do things, sink all his energy into it for three or four years, then once it was on its own energy, it was time for him to move on to something else, break some new frontier. He had a very active mind. I don't think the guy ever relaxed. ●

# BHANG! BHANG! YOU'RE —

by Peter Gorman

Ah well, even India changes. The country which brought you the hookah, chillums, hashish and the word ganja, the country Karl Marx had in mind when he compared religion to opiates, has finally closed the doors to its government-run ganja houses. No more strolling up to the counter and ordering a tolar of opium or a 10 rupee chunk of hashish. Not that dope isn't to be had easily enough—hashish, charras and opium vending is the standard sideline of nearly every taxi driver and holy man in the country—but the heat has been turned up to stem the use of cannabis among both the masses and tourists alike and a political campaign is underway throughout the country to educate the population to the perils of substance abuse.

The problem with campaigns like the one currently in vogue in India is that they're basically reactionary with a wild sense of overkill: heroin and cannabis are frequently depicted in the same light in educational pamphlets and on billboards which dot the Indian countryside and clutter the cities, sending out a message which is not only confusing but just plain wrong.

Which is why it was pleasantly surprising to discover at least one state in India that refuses to go along with the government line: in Rajasthan, the desert state, bhang—cannabis—in various forms remains a legal, if somewhat downplayed, high.

Here's the thing: before I left for India, friends said I had to try the bhang lassis there—a lassi is a sweet yoghurt drink—and I asked for them in nearly every restaurant I stopped in. But over the course of my first week I'd had no luck. Most of the waiters simply shrugged, nodded their heads and said, "not possible." So I'd stopped asking for them. But then one day in Pushkar—a tiny Rajasthani city on the fringe of the desert—at the Shiva Restaurant I saw them on the menu and ordered one for lunch. The cook, a stoned freak, disappeared into the depths of his dark kitchen and returned in a moment with a light emerald green drink in semi-clean glass.

"Want to smoke some hash?" he asked, sitting next to me and lighting a chillum.

"Not today. I want to see how high I get from the lassi."

He laughed. "Weak shit."

I drank the lassi and made my way down to the street from his rooftop restaurant. I figured on a 30 minute kick-in time and walked to the edge of the desert where thousands of camels had been brought for a trade fair. The camel field was extraordinary but after 30 minutes nothing happened. Or an hour. At an hour and a half I gave up and returned to the Shiva. Maybe it was me. Maybe they made them for tiny Indian people and I needed two of them.

"I'll have another," I said.

"How is it?"

"Not much of a buzz."

"I told you. Hash?"

"I'm sticking with the lassi today."

He made me another and I drank it down, headed back to the camel field and waited. The camels, yellow, brown and black, were huge and beautiful beasts with beautiful

large brown eyes and long graceful eyelashes; the young ones playfully wrestled with one another, legs and long necks a tangle of muscle. The older ones took the sparring more seriously: they faced one another, bellowed and charged, crashing their necks together over and over until camel boys with long sticks would break them up. But the bhang lassi was still a bust.

It was nearly evening when I returned once more to the Shiva. I figured that the bhang was illegal and that was why he was serving me bhang lassi which was the equivalent of a margarita without the tequila, but I also figured I owed it one more shot.

"You want another?" he asked when I'd made the stairs and sat.

"I thought they were supposed to get you high."

"Oh," he shrugged, "You want a strong one? Five rupees more."

"No problem," I said, reaching into my pocket.

He called to a young boy sitting at one of the tiny tables. The boy took my bill and disappeared down the winding stairway. I watched from the edge of the roof as he emerged onto the street and ran—all arms and legs, just like the young camels—to a cigarette-sweet stand. In a moment he was flying back, a package of cookies in his hand, one in his mouth.

"The five was for cookies?" I asked, not seeing the connection.

"No problem," the cook answered.

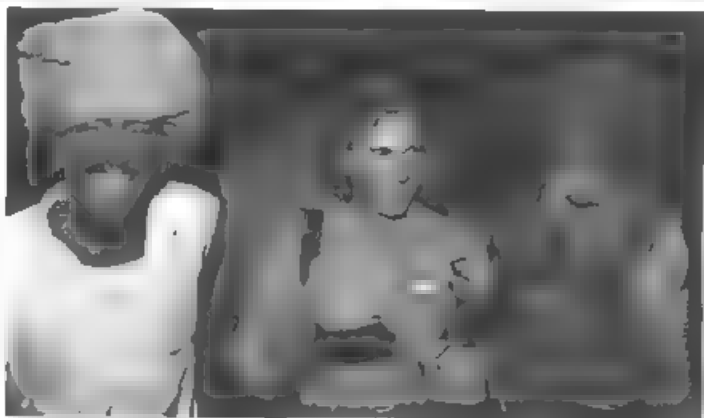
The boy returned and disappeared with the cook into the kitchen. This time when the cook emerged he handed me a dark lime colored lassi. I drank: tasted like hashish milk. I'd hardly finished it when I began to feel the kick.

"More like it," I laughed.

"Don't get run over by a sacred cow. Remember what direction your hotel's in."

I thought he was being cryptic until I tried to walk. My legs were rubber on the stairway and the sacred cows milling about on the streets were sort of dangerous looking. This was what my friends were talking about, I thought as I stumbled about. This was a bhang lassi.

I made my way to the camel field and sat beneath a lonely pipal tree—about all I could manage—and spent the next couple of hours listening to the bellows, shrieks, bleats, cries and sighs of the camels as they settled in for



*The author enjoys a pipeful with a pair of Rajasthani camel dealers.*

→ HIGH!



the night. Some of their owners came around and offered to share hashish or opium but I was too high to consider it. It was a beautiful night.

I found my way back to my room some time later and in the morning woke up wondering what the hell that boy had bought at the sweet stand. After coffee I made my way there but once there didn't know what I was after.

"I can help you?" the proprietor asked.

"I'm uh, looking for..." I started, fumbling around. I decided honesty was best and finally just blurted out my request. "Can I get some bhang here?"

"Why not?" he asked, shaking his head no, in that

peculiar way Indians have of shaking no when they mean yes and vice versa. He pointed to a large glass jar on the counter which was filled with little candies wrapped in yellow plastic.

"No. Bhang," I said.

"Yes, I have heard you. I am telling you yes."

I didn't want to seem completely lost so I pulled one from the jar. The wrapper read Rocket Munakka. "This is bhang?"

"I am telling you and telling you."

I paid him the one rupee he wanted and opened the wrapper. The candy was a little black ball of goop covered





PETER GORMAN

*The sun sets over the sacred lake of Pushkar.*

in sugar but when I broke it open, sure enough, it smelled like dope to me.

"How can you sell this like this?" I asked. "This is illegal."

"My friend, in India it's illegal. In Rajasthan it's legal." I looked around: no heat nearby so I bought 20 of the little Rockets. The cookies I'd seen the boy with must have just been a tip for running the errand.

"I tell you, it's no problem. This is Rajasthan. Enjoy." I walked back to my room, ate one and stashed the rest. The taste was awful, bitter and dry, but twenty minutes later I felt the same buzz coming on that I'd had the previous night. It was smooth and easy, like hash brownies but without all that sugar and flour to slow things up. Just a good clean head and a thorough body rush. Knowing what was coming this time I was able to handle the streets and spent an entire morning and afternoon strolling about and smiling.

But I still didn't get how they were legal here when bhang had been made illegal throughout India. I mean, this was on the street in factory packaging and it was curious, so that night I walked into the local police station and asked about them.

"Excuse me," I started, "but I'm a reporter and I've got a question you might be able to help me with." The three officers on duty all shook their heads no and waited for me to continue.

"I'm wondering about the status of bhang in India..." The three of them laughed. "So you have found our lassis?" they asked.

"Well, I've heard about them..." I lied.

"Or is it the Rockets you have found?"

"Well, I've heard that they might be found here..."

"Not to worry. Very good, no?"

"Are they legal?"

"Here in Rajasthan they are."

"What do you mean?"

Again they all laughed. "As we say. Here in Rajasthan."

"What my friends are saying is that here in Rajasthan the bhang is remaining legal."

I looked at them quizzically, wondering if I was still high or if perhaps they were.

"It is this way: when this most recent campaign to rid our country of drugs was started everyone but the smugglers was happy. Until it was discovered that bhang was also now considered a drug."

A different policeman jumped into the fray. "And then there changes the emotional climate throughout Rajasthan. Bhang has been with us so long a time, and it is harmless, more or less. And so when the time to make it illegal came, Rajasthan threatened to secede."

"What? From India?"

"Where else? And then our parliament saw what was the right thing to do to avoid civil war."

The last of the three joined in: "Let the people have bhang. And it is so. Here in Rajasthan we are an independent people. We would have gone to war. And of course, the people would have ignored the edict anyway, so why have bloodshed?"

"And you're saying I'll have no problem whatsoever if I manage to get some bhang?"

"What else? Only don't step into traffic after you have eaten a Rocket."

I laughed and left the station, went directly to the sweet shop and bought two boxes of Rockets. In the morning I mailed one of them home. The other got me through the remainder of Rajasthan with a smile.

Next time you're in Rajasthan try the lassis. They're terrific. ●

by Lou Storhis

# HIGH ART



*Savage Pencil-detail from the LP Angel Dust (Blast First Records).*





# THE INDOOR ORGANIC VEGETABLE GARDEN

by Steven Hager

Until the spring of 1989, I'd never grown a vegetable in my life. However, after working at HIGH TIMES for three years, and after looking at countless indoor cannabis gardens, I began to wonder if all the innovations pioneered by pot growers could be utilized for indoor vegetable production.

I didn't know where to begin, so I called East Coast Hydroponics, the only indoor grow store in the New York area, and spoke to Bill Ross, the owner. Fortunately, Bill was an avid organic freak and agreed to supply me with all the necessary equipment to start a modest indoor operation. He even offered to deliver the equipment to my apartment at no charge.

"I'd like to grow some organic vegetables," I said over the phone. "Yeah, vegetables, heh-heh," laughed Bill. "That's what *all* my customers grow. You should check out the seed companies in Holland."

"No, really, Bill. How large would the grow room have to be for me to become self-sufficient?"

I don't think Bill believed me, and he didn't know the answer to my question anyway, so I decided to start out small: a 400 watt Maximum metal halide (big enough for a 4'x6' area) and two fluorescent fixtures for seed starts and vegetative growth. Bill assured me the three fixtures wouldn't draw more than \$30 worth of electricity a month, even at New York City rates.

"I'm not worried about the bill," I said. "The company's gonna cover it."

Little did I realize this innocent venture would soon change my life.

While waiting for Bill to arrive (it took about two weeks of prodding before he found the time to drive into Manhattan from Staten Island), I ordered a slew of seed catalogues. Many of these were full-color glossy magazines filled with photos of impressive-looking vegetables and all sorts of exotic growing equipment for the outdoor farmer (see sidebar). However, aside from seed starting, they contained no information on indoor cultivation. It was obvious from reading the catalogues that the indoor growing revolution had not yet penetrated our domestic seed companies—which means there weren't any vegetable seeds currently being bred for artificial light. I had to be content with ordering strains developed for greenhouse production. Since I had no idea which would do well under a metal halide, I ordered about 30 different vegetables and fruits, including tomatoes, peppers, beans, cauliflower, broccoli, squash, radishes, strawberries, lettuce, watercress, pak choi, carrots, zucchini, cucumbers, cabbage, melons, and one super extra dwarf apple tree.

A few days later Bill appeared with an amazing array of equipment. Aside from

the lights, he brought three flats with plastic tops for seed starts, a bag of Jiffy-7 peat pellets, several gallon size square pots, three electric timers, a minimum-maximum thermometer, a bale of Pro-mix BX, worm castings, seabird guano, bat guano, fish emulsion, and many other trace ingredients for my soil and tea mix (see sidebar). I was surprised to discover that the cost of the lights, equipment and supplies—which would last for several years—totaled under \$600.

It only took a few hours to set up the operation in a spare bedroom. I selected a location that received about two hours of afternoon sun. (Because cannabis is illegal, pot growers have to conceal their indoor gardens. I didn't have to worry about such restraints, and wanted my garden to receive as much natural light as possible.)

I soaked the jiffy pellets in water, placed a seed in each pellet, put them in a flat under a fluorescent light, and covered the flat with its clear plastic top. Within a matter of days, many of the seeds were already sprouting. Two weeks later a few of my seedlings were ready to be transplanted under the metal halide, which was put on a 12-hour cycle.

My attitudes toward organic food underwent a profound change the first time I mixed a fresh batch of soil. I had no doubt that the dark, rich dirt in my hands held the key to survival. Healthy soil creates an environment where microbial life can flourish. Microbes are the building blocks for all life. Why this realization never occurred to me until I mixed my own organic soil I don't know, but it certainly had a profound effect on my food-buying habits. I realized that the synthetic fertilizers and chemicals our farmers have been dumping on our farmland, not only destroy the microbes that support our own existence and poison farm-workers, but they create very inferior food. Before long, I stopped buying produce at the local grocery store, and began shopping only for organic food. Although it was a little more expensive, I knew it was a better bargain since it was probably more nutritious and certainly free of chemical poisons.

I began reading about organic agriculture. Its value has been well-documented since the 1940s, yet our government has never encouraged its proliferation, and no serious study has ever been undertaken to prove that organic food is more nutritious than chemically produced food. In fact, because of our government's close relationship with the petro-chemical industry, everything possible has been done to encourage the chemical farming that has destroyed our soil and poisoned our ground water. The best way to change this situation is to stop

buying chemical produce. These realizations followed directly from my involvement with organic gardening.

For the next few weeks I looked in on the garden every morning before making breakfast. Most of the plants were watered lightly every day and given the tea mix once a week. They grew healthy and strong and began to flower with a minimum of effort. I kept the windows open and allowed plenty of fresh air flow. I never had a serious insect problem. When mites did appear, I simply sprayed fresh water on the underside of the leaves. If that didn't control the problem, I followed up with a light spraying of rubbing alcohol. Even during the hottest days, pesticides were never required. Within a few months, I was eating fresh salads picked straight from the garden. I never have to worry about eating a fresh tomato anymore—I have an endless supply.

My conclusion? If you're interested in experimenting with indoor growing, I suggest you start with an organic vegetable garden. Such gardens are inexpensive, provide a satisfying hobby and greatly improve one's diet. They provide a glimpse into the mystery of life itself. If you've had any experience with growing organic vegetables indoors, I'd like to hear from you. What seeds have you found most productive? What natural fertilizers do you use? Is it possible to compost in an apartment? Send me photos of your garden and I'll run them in a future issue. Send all info to: Steven Hager, HIGH TIMES, 211 East 43rd, NYC 10017. ●

## SOIL MIX

70 to 80% Pro-mix BX (peat moss, vermiculite, perlite)  
20 to 30% worm casting  
1 cup New Jersey green sand (per gallon)  
1/2 cup Bay Crab (per gallon)  
1/4 cup hydrated lime (per 3 gallon)  
1 1/4 cup TMI-188 (per 3 gallon)

## TEA MIX (per gallon of water)

1 tsp. bat guano  
1 tsp. sea bird guano  
1 tsp. fish emulsion  
1/4 tsp. Maxi-crop Seaweed Powder

## VEGETABLE SEED COMPANIES

Burpee Seed Company  
300 Park Ave.  
Warminster, PA 18981-0003

Stokes Seeds  
28 Water St.  
Fredonia, NY 14063

Thompson & Morgan  
Box 1308  
Jackson, NJ 08527

Hydro-Gardens  
PO Box 9707  
Colorado Springs, CO 80932

# MARILLIANA: THE ROCKWOOL BOOK





*An 8"x 12" slab of rockwool easily supports an eight foot plant.*

## By Jorge Cervantes

Growing in rockwool is twice as productive as soil and it's easy! Rockwool is the biggest innovation in marijuana growing since grow lights. This revolutionary new soilless medium consists of thin strand-like fibers made from rocks.

Mother Nature demonstrated rockwool to "pacalolo" smokers on the islands of Hawaii as a volcanic product in 1840. Volcanos erupt tiny droplets of molten lava. The droplets of lava are sprayed high into the air. Strong tropical winds whip this magma into long, thin hair-like fibers. Known in Hawaii as "Pele's hair," hair of the god of volcanos, this natural fiber (rockwool) has been collected for centuries and used as a medium to cultivate orchids. By 1865, it was produced in the United States for insulation. In fact, the walls in your home may be packed full of it. In Denmark, over 100 years later, rockwool was first developed commercially for horticulture. In 1985, horticultural rockwool, glass wool, growool, or mineral wool was introduced into the US.

Like perlite, vermiculite and numerous other soilless mixes, rockwool was originally used by commercial growers, and later marijuana growers discovered the numerous ways it improves garden soil.

Organic growing mediums like peat, sawdust and soils are

becoming more expensive to produce, they decompose and their water holding capacity changes. Inorganic mediums like sand, gravel, perlite, etc. will not hold as much solution as rockwool which also offers more buffering capacity. This fact, coupled with the high cost of sterilization, prompted European growers to explore new alternatives.

Danish growers began using rockwool in 1969 as a way around the ban on soil-grown nursery stock imposed by some of the European community. Now, essentially all cucumber crops in Denmark are grown in rockwool. Today, an estimated 50% of all Western European greenhouse vegetables are grown exclusively in rockwool. In Holland, land under cultivation in rockwool will double from 2,500 acres in 1984 to 5,000 acres by 1990.



*This wet slab full of cuttings is safe to handle. Note the white, healthy roots.*

Rockwool caught on fast in Canada's progressive greenhouse industry. Greenhouse vegetable growers from Nova Scotia to British Columbia are using more rockwool every year.

Japanese growers have started the switch to rockwool and will continue to change rapidly. Rockwool simply offers them the best value. One of the major uses the Japanese have found for rockwool is to propagate rice.

Soil is difficult for American growers to abandon. But they have been trying rockwool indoors with fantastic results. It's great for fast, controlled growth and holding water for cuttings and seedlings.

Rockwool is a better value than other mediums and it lasts much longer. In fact, 1" rockwool cubes retail for 1/2 the cost of peat pellets! Plus the rockwool cubes are easier to transplant than the peat pellets, which require removal of the outer plastic mesh.

The best rockwool garden will produce 10-20% more than the best soil garden. This easy to achieve yield, coupled with a few simple cultivation techniques, makes rockwool produce twice as much as soil. Rockwool really comes on the strongest with cuttings. Patio gardens are great for slabs.

Horticultural rockwool is produced from rock alone or a combination of rock, basalt, limestone and coke. The best horticultural rockwools are produced from volcanic basaltic rock (diabase). These rockwools have a mineral balance that is inert and will not react with the nutrient solution. Insulation-grade rockwool is produced from steel or copper slag, a waste by-product from smelting. These rockwools contain a high amount of metals (copper, iron, etc.) that may react with the nutrient solution. The insulation-grade rockwool also compacts easily, which decreases aeration and even nutrient holding ability. The high quality rockwools have uniform fibers, even distribution of the binder and very little shot (mineral pellets that have not been spun into fiber). This high quality rockwool weighs less than five pounds per cubic foot.



*This young plant has a strong root system, even with the inherent problems associated with insulation grade rockwool.*

Low quality, insulation-grade rockwool has more of this problem-causing "shot" and weighs seven pounds or more per cubic foot.

The insulation grade of rockwool compacts or settles easily. Although still porous and well draining, this compaction upsets the air-water ratio that is so important to all hydroponic growing. The other problem with insulation grade is pH drift. It is caused by substances being released into the nutrient solution, primarily potassium hydroxide, which is used for liquid pH-Up. This is a natural by-product of the weathering of basalt, potassium hydroxide.





*Hundreds of seedlings are easy to manage in 4"-rockwool cubes.*

causes the pH to continually drift up above seven to as high as ten. A high pH causes precipitates and locks out or makes unavailable many elements that the plants need from the nutrient solution.

Rockwool fibers naturally repel water because they contain mineral oil. During manufacturing the mineral oils are removed from high quality horticultural rockwool and replaced with mineral wetting agents when the rock is melted. Lower quality insulation grade rockwool does not remove the water repelling mineral oils. They add a chemical wetting agent (similar to liquid dish soap) that allows the naturally water repelling rockwool to hold water. The wetting agent must be added regularly to the rockwool or it may wash out.

**NOTE:** Uniform wetting is one of the most important qualities in rockwool. It promotes even root growth and no dry or wet pockets with even drainage.

The rigid rock components are melted at temperatures exceeding 2,500°F. This molten solution is poured or sprayed over a spinning disk. As the molten solution flies off the disk, it elongates and cools to form hair-like fibers. The process is very similar to the way liquefied sugar is poured on a spinning disk to make cotton candy. The molten sugar spins in the air and cools into long fibrous strands of cotton candy.

A binder (phenol-based resin) is added to the product of these fibers, rockwool, immediately following spinning. This plastic-like binder



*These short plants are almost ready for harvest.*

material prevents potassium hydroxide (which is also used to raise pH) and other elements from leaching into the acidic nutrient solution. After the binder is added, the rockwool is compressed and cured into large uniform slabs or granular flock. The amount of pressure applied when forming the slabs dictates the density of the rockwool. The blocks are rigid and easy to handle. They may be cut into just about any size or shape desirable. Granulated rockwool flock is easily placed into growing containers or used like vermiculite or perlite as a soil amendment.

The heat used to produce rockwool renders it sterile and safe to grow in. The length and thickness

of the rockwool fibers are regulated by the speed of the spinning disk, the consistency of the molten rock mix and temperature. Different densities are made at this stage. The most consistent rockwool is made from four wheels spinning toward one another. The fibers spin off the first disk and are caught by the second, then the third and the fourth disk. The end product of the fourth disk is the most consistent.

The grain or the direction the fibers run in the rockwool slab is important for water absorption. The fibers run horizontally in slabs. The horizontal grain allows the nutrient solution to drain slower from the slab allowing good capillary movement and retaining even moisture. Propagation and small cubes have vertical grain. The up and down grain is perfect for the fast draining required by seedlings and clones. The random orientation of the grain in rockwool flock promotes root growth in all downward directions.

Larger rockwool slabs do not necessarily bring a higher yield. But a larger chunk of rockwool makes a larger reservoir to hold nutrient solution and is more reliable. Six-inch slabs are as good as eight-inch slabs for crops up to three or four months in most hobby gardens and they are more economical. I do like eight-inch slabs for short rectangle and square gardens. The wider slab offers more ballast for the larger plant.

Even though rockwool will hold 10-14 times as much water as soil, it does not provide the buffering action



*A hedge of Northern Lights growing in rockwool slabs.*

available in soil. The pH or acid to alkaline balance of dry rockwool is about 7.8 to 8.0. PH-Down is added to the water solution to lower the pH to 6.5 to 7.0. An acidic fertilizer solution (about 5.0 on the pH scale) is required to maintain the actual

*continued on page 72*

# THE CANNABIS CUP AWARDS '89

## THE WINNER: EARLY PEARL/SKUNK#1 X NL# 5/HAZE

by Ed Rosenthal

Seeds are fascinating organisms. Condensed into each one is a tiny embryo and enough food to get started when presented with the right conditions. Suspended in its own time, a seed functions at an incredibly slow rate of metabolism, allowing it to live for years with no external stimuli. Given water and moderate temperatures, it sprouts and its genetic blueprint begins to unfold.

For most gardeners and farmers, seeds represent the promise of a new beginning. From seed to flower seems a complete set. The cyclical nature of life—completing the circle, returning from an active to a passive state of life—remains hidden. But a small minority of gardeners and farmers view the seed, not the bud, as the prize to be harvested.

Each seed represents not just another plant, but an entire genetic history—the cutting edge of evolution and human engineering. Just thinking about seeds in these terms imbues them with a certain power. Truly: A garden is no better than the seeds that it's grown from. No matter how sophisticated the equipment, bunk seed produces bunk weed.

Because of politics, marijuana is a crop unlike any other. Marijuana is the most valuable crop grown. An acre of corn yields about 100 bushels. At harvest it's worth between \$300-400. A square foot of indoor marijuana, cultivated intensively, yields between 2 and 4 ounces per 3-crop year. At a price calculated conservatively at \$150 an ounce, a square foot can gross between \$300-600.

Most marijuana research is conducted informally, by hobbyists rather than academic or commercial institutions. While one person's results may be open to doubt, the replication of these experiments by thousands of other gardeners functions like a giant laboratory. Rather than just a few centralized areas where research is

conducted, there are truly "a thousand points of light." On the other hand, it's difficult for new research to get out because of the risks involved.

In the same way the political climate has affected marijuana research, it has also had tremendous impact on the availability of high quality seed. In the '60s and '70s, gardeners learned that seeds from their best stash were often not suitable for cultivation in their area. Since no seed companies existed and there were few good varieties around, serious growers began attempting to develop their own high quality, high yielding varieties. These new strains varied greatly in quality and there were no organized means of distribution.

In the United States, a few brave souls have tried to develop and sell superior varieties. But success and fame have usually been followed by legal problems. That's why our five judges had to go to Holland to test samples provided by four Dutch seed companies: Cultivator's Choice, S S S C, The Seed Bank and Sensi-Seed.

There were 19 entries in four categories, mostly sativa, partly sativa, mostly indica, and partly indica. Our five judges had four days to test and evaluate the samples. There were no lightweighters on the panel. Patty Collins

of Pype's Palace, John of C J. Enterprises, Flick Ford, art director of HT, Steve, a West Coast connoisseur acquaintance of mine, and myself. At first glance, we thought that judging the Cannabis Cup Awards would be a fantasy come true. Instead, we found that we learned our limits.

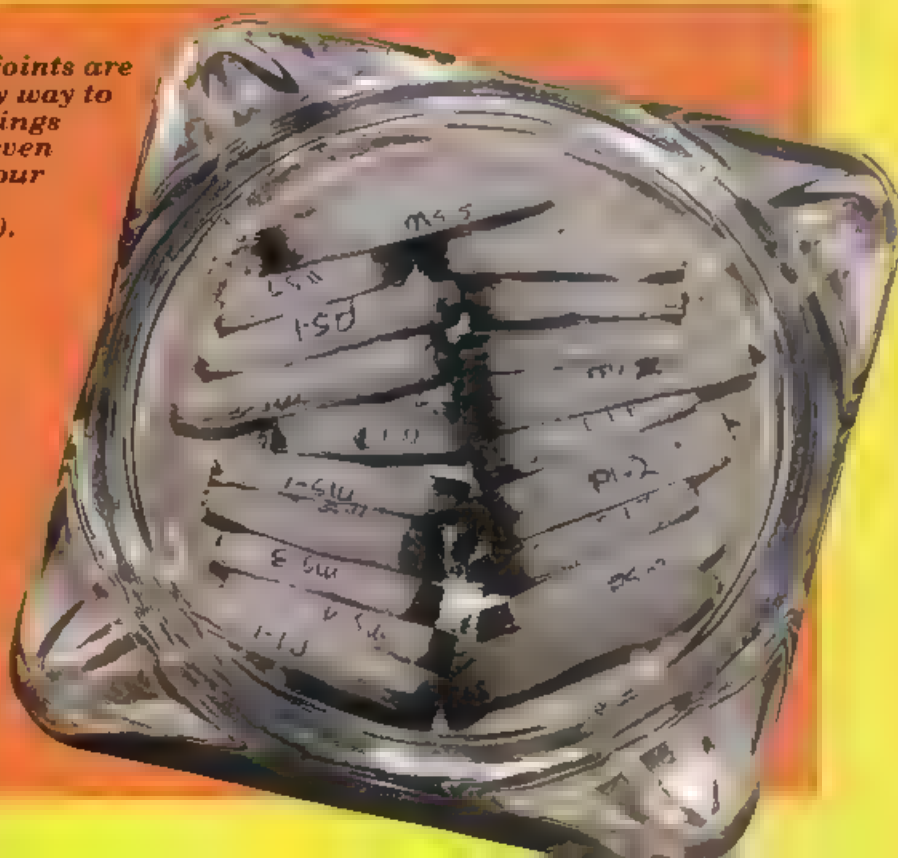
All of us except Patty stayed in Breda, a small resort town in south



WEST COAST CONNOISSEUR JR

*In the garden restaurant of Sensi Smile in Rotterdam, Flick tries Ben's new pipe, which, at the push of a button, lights the smoke and blows it into your mouth.*

*Coded joints are the only way to keep things clear (even when your head is fogged!).*



AN HONKY VOETEN

*Queen's Day in Amsterdam is a giant smoke-in. Everyone wears a bra...even the buildings!*



ANTHONY VOETEN



ANTHONY VOETEN



ANTHONY VOETEN

**Above: coffeeshop signs in Amsterdam.**

central Holland. The week we were there, a swing and Dixieland jazz festival engulfed the town. During the testing we took trips to Nevil's Seed Bank, the Hash Info Museum, the Sensi Smile in Rotterdam and any number of restaurants, cafes and pot-selling coffeeshops.

The first timers to Holland quickly fell in love with the country, Steve said. "I didn't have expectations because I didn't want to be disappointed. It far exceeded any I could have had. The people were friendly, open and free. You could walk the streets at night, it was very safe, the streets were clean. There were good people. There was good food. There was a good environment. There was good smoke and good drink. It was a once in a lifetime opportunity to experience the people of Holland."

As a frequent visitor to the country, I have found it to be a progressive place, in the middle of a continent which is undergoing a renaissance based on the new unity between the EC countries (European Common Market) as well as the thaw in East-West relations. John said, "It was very educational. Since visiting there I have been reading its history. The horticulture there is outstanding. What they are doing with greenhouses and the way they use every last piece of land for cultivation is remarkable. The Hash Museum exhibited live plants in different growth stages and the other exhibits which were very informative.



ED ROSENTHAL

**One of the grow rooms at Cannabis Castle.**



ED ROSENTHAL

**The curing rack.**

#### **Points were awarded for:**

**TASTE and AROMA 0-10  
STRENGTH AND  
QUALITY OF HIGH 0-15  
STICKINESS and  
VISUAL APPEAL 0-5**

John and I did not judge the third category, stickiness and visual appeal, because we felt it did not matter as far as our heads were concerned. On the other hand, Patty examined each bud very carefully, as did Steve.

Each judge had their own method. I smoked all the sativa and sativa hybrids the first day. The next day I smoked indicas. The third day I alternated between the sativas which picked me up and the indicas which laid me back a little. Sometimes I went back and forth to see which was the stronger. The third day we also smoked some cocktails—combos of different grasses. On the fourth day I re-evaluated my notes and judged between the finalists on my list. I also went to some Dutch friends in a couple of Amsterdam coffeeshops and they confirmed my opinion.

I feel I made a tough examination. The ones which won deserve it. I knocked off points for weakness or lack of stickiness. Only the most unusual and unique tasting herb reigned the highest.

I have five categories which I think are superb: Thai, Jamaican, Hawaiian, Colombian and Mexican.

Steve said, "I took two days off in my room and did nothing but drink coffee and rest. I watched some movies. They should give it to us rolled so that you don't form a prior opinion, but I got down with a 30 power portable microscope to look at the crystals, the maturity, clear or amber, which changes the type of high as they cycle."

**Flick:** "I cut up and delivered the samples to the other judges so I really got to see what condition the buds were in. This was an advantage and a disadvantage so I tried to make the samples uniform even if I destroyed the looks of some specimens."

"My personal favorite after a few days of testing was last year's winner, SK #1. SK #1 is to me, the most





*The Cannabis Info Museum in Amsterdam.*



*Interior view from the museum's front door.*

completely satisfying cannabis strain there is. It's taste, aroma, looks and high are consistent and unique in the world of cannabis. A lot of weed is like SK#1, but pure SK #1 is like no other strain in the world. I'm not a big fan of indicas, although they were popular with the other judges. So, I didn't expect it to beat N.L. #1. N.L. #1 was so full of resin it just looked levels above the rest. Look for the Haze's to dominate next year."

The judges agreed that most of the samples were in the mid-range with a few outstanding contenders and a few which should not have been entered. **Patty:** "The quality of the samples was superb. There was a lot of sativa. It picked me up and gave me a moving energy. Three of the samples were really not contenders. It might have been the way they were dried. The seeds the breeders are selling today are much higher quality than two years ago. Their customers have told them what they want and they keep improving. The taste is better and the stone is clearer rather than zombie-like."

**Steve:** "There was one sativa which put me to sleep twice (MS 6). I took three hits and within 35 minutes I was asleep. Then I woke up 9 hours later, drank a couple cups of coffee, had breakfast, smoked another three hits and took a three-hour nap a half hour later. It felt like eating a quaalude. It felt more like an indica, but because it was so amber I could understand the reaction. It was overripe and gave a very relaxing soporific high. MS 5 was the sweetest, tastiest, most active high. Five should not have been submitted, and five were really excellent. The other nine were good. But they didn't open your eyes up and say 'I want more of that'."



*Flick and Ed getting ready to announce a category winner.*

**John:** "The quality was very good and they did do a good job of growing it. The testing was done in an orderly fashion. There should be fewer samples or more time. I especially liked the Haze. The Skunk was a bit harsh."

On the fifth day we attended the awards dinner. All of the judges, the contestants and a few of their friends and relations attended. The dinner was held at the Yum-Yum Restaurant in Rotterdam. It is right next door to the Sensi-Smile, which is the sole marijuana and hash-only shop in Holland. The dinner was a sumptuous affair.

We began with a Sensi-Cocktail which was a good tasting, alcoholic beverage served in long-stemmed cocktail glasses. It was a pastel olive green, the result of its treatment with cannabis. The dinner included an excellent salad bar, and gourmet nouvelle entrees. Since these courses contained no marijuana, fat joints made from the best samples were passed around. Cultivator's Choice offered chocolate-marijuana ice cream bon-bons. They were very potent. Dessert consisted of a marijuana-lemon poundcake. The crowd offered a round of applause to the chef.

I was the master of ceremonies and, together with Flick, officiated at the actual awarding of the prizes. Brass and wooden plaques were presented for each of the four winners, one in each category. The Cannabis Cup was awarded to the winner with the highest total.

This year the Seed Bank swept the field taking all of the five prizes.

One judge said afterward, "Several photographers were taking pictures, so flashes were continually popping. During the dinner I thought, just try and do this in the US! We were honoring the seed breeders, giving credit where credit was due. There was a feeling of fellowship, that we were among friends, almost family, an essential cog in the mechanism, that runs from the breeders, to the judges, the writers, the readers and, ultimately, all marijuana users."

After the ceremony, a breeder brought up a serious question: Can a seed company buy another company's seed and start breeding it on their own, without paying any royalties? I answered that in the non-marijuana market it's done all the time. One method that seed-people use to protect themselves is to sell hybrids. The second generation is not uniform and is of less value to the grower. This gives cultivators the incentive to purchase new seeds. Generally, plants which are patent-protected can be used for breeding. However they cannot be duplicated using cuttings, which reproduce the exact genetic makeup of the clone-mother.

All of the judges enjoyed participating. "It was the best time of my life--this is something that people dream of doing and I did it. When I stepped from the elevator in Breda I knew I was in the right place. I just followed my nose."

"It was a once in a lifetime opportunity to experience the people in Holland."

"I felt proud to be part of the whole thing. I would be honored to go again." ●

# THE RESULTS

THE WINNING CUP SAMPLES AND GENOTYPES

## KEY

MS= MOSTLY SATIVA  
PS= PURE SATIVA  
MI= MOSTLY INDICA  
PI= PURE INDICA

*Below: A well organized judges kit includes: samples, ballots, magnification tools, and smoking materials.*



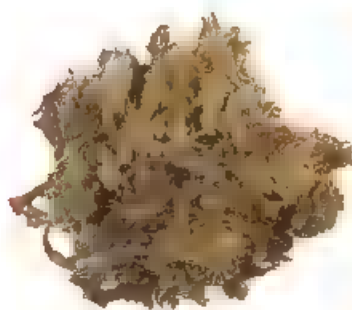
STEVE BAKER



MS-1 SK1 (GREENHOUSE)



MS-2 SK1 (ART. LIGHT)



MS-3 NL x HAZE x EP



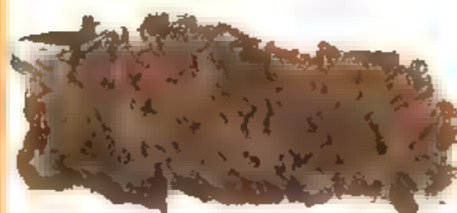
MOSTLY SATIVA WINNER  
MS-4 EP x SK1 x NL5 x HAZE



MS-5 NL5 x HAZE



MS-6 ROYAL DUTCH

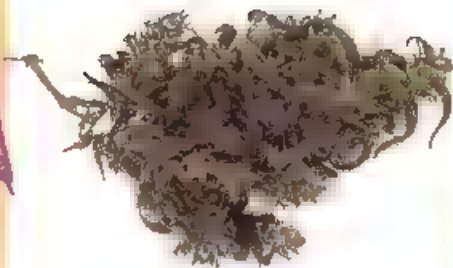


MS-7 SK1 x BASIC5 HYBRID

2



**PURE SATIVA WINNER**  
PS-1 HAZE x S. AFRICAN SAT.



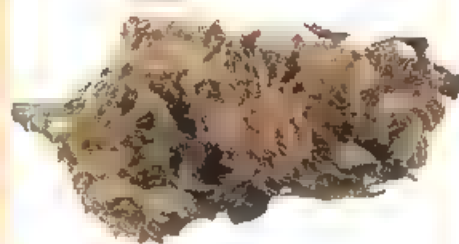
PS 2 HAZE x PAKISAT



PS-3 SORONA SUPER SAT.



MI-1 EP x SK1 x NL5



MI-2 NL5 x SK1

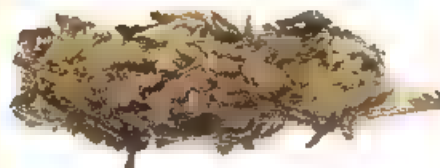
4



**MOSTLY INDICA WINNER**  
MI-3 BIG BUD x SK1



MI-4 SHIVA

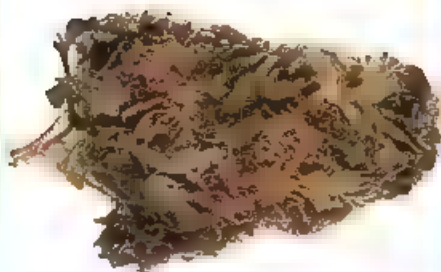


MI-5 SHANTI-AFGHAN

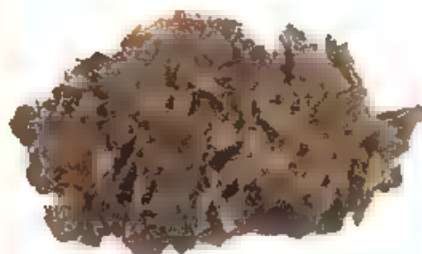


MI-6 WILLIAMS WONDER

3



MI-7 VICTOR BARNES



PI-1 NL5



**PURE INDICA WINNER**  
PI-2 NL1





# Still Life of Dutch Cannabis



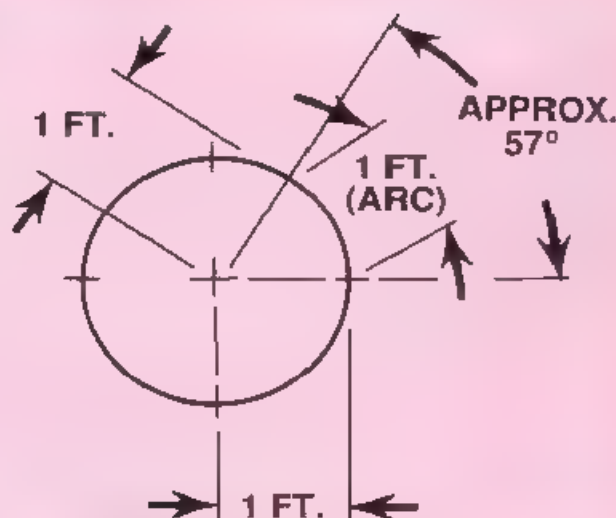
# LIGHT INTENSITY

## HOW MUCH IS ENOUGH ?

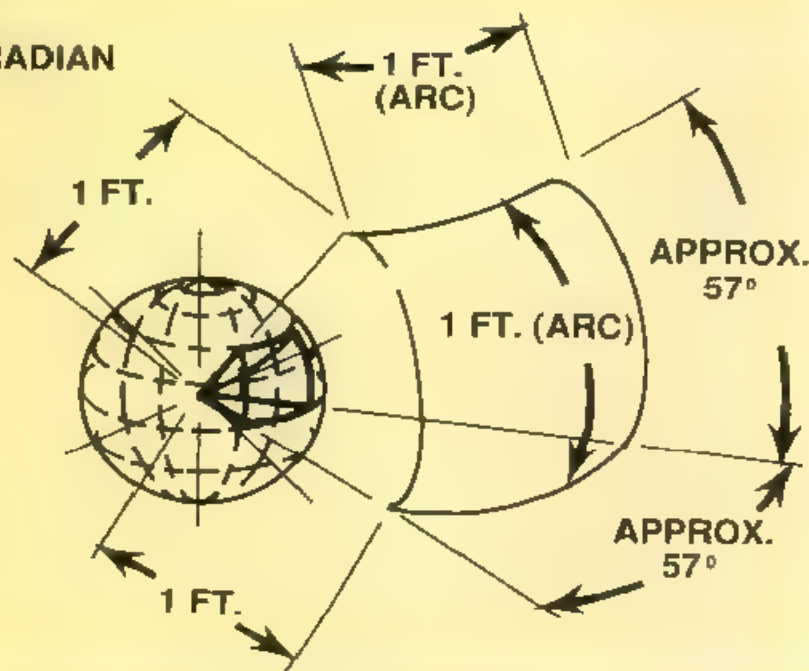
Recently I have read some articles and comments in **HIGH TIMES** which have piqued my curiosity about halide light intensities, and their effect on proper bud development.

ALL CHARTS BY BRIAN SPAETH

**FIGURE 1**  
**ONE RADIAN**



**FIGURE 2**  
**ONE STERADIAN**



**BY PROF. T. H. CUSTER**

In the October '88 HT Ed Rosenthal responded to a letter by Plantlet by stating that a minimum of 1500 lumens was required to produce viable seeds. In his article 'High Tech, High Light' (HT, Sept. '87), Jorge Cervantes stated that "1,000 to 2,500 footcandles are needed to produce strong, healthy flowers." Assuming that strong flowering and viable seeding require similar levels of light, Jorge is allowing a lower minimum limit (Lumens and footcandles are defined differently, but are mathematically equivalent.) Who's right? Have studies been done? And what type of measuring equipment did Ed and Jorge use?

Also in the October HT I noticed an ad, which, like Jorge's article, charts the average footcandles in an area. (Jorge was more specific.) In both cases, most of the readings fell well below even Jorge's 1000 fc minimum, using 1000W halides placed 36" to 40" from the minimum measurement point. Jorge's figures show two important facts about indoor lighting.

The first fact is easily seen by the lines he uses to connect the same values. Ideally, we should be seeing perfect circles, since this is how light behaves. The fact that we don't indicates that the current reflectors used in HID lights are far from perfect.

The second fact can be seen by the figures themselves. Considering the strange dispersions obtained by most reflectors, I ran through some numbers to construct a mathematical model of light dispersion with a stationary single-point source (like HID) 36" from the floor. If at that distance a grower is getting 100% of the light he desires directly under the lamp, at 4' from the center of the grow area (the edge of an 8' x 8' square) plants will be receiving 36% of the desired light. If that wasn't bad enough, at the corners of the area the plants will only receive 22% of the light. This is because light disperses radially, and its intensity follows the inverse squares law, which Jorge mentioned. This means that a grower needs to maintain his plants all at the same radius



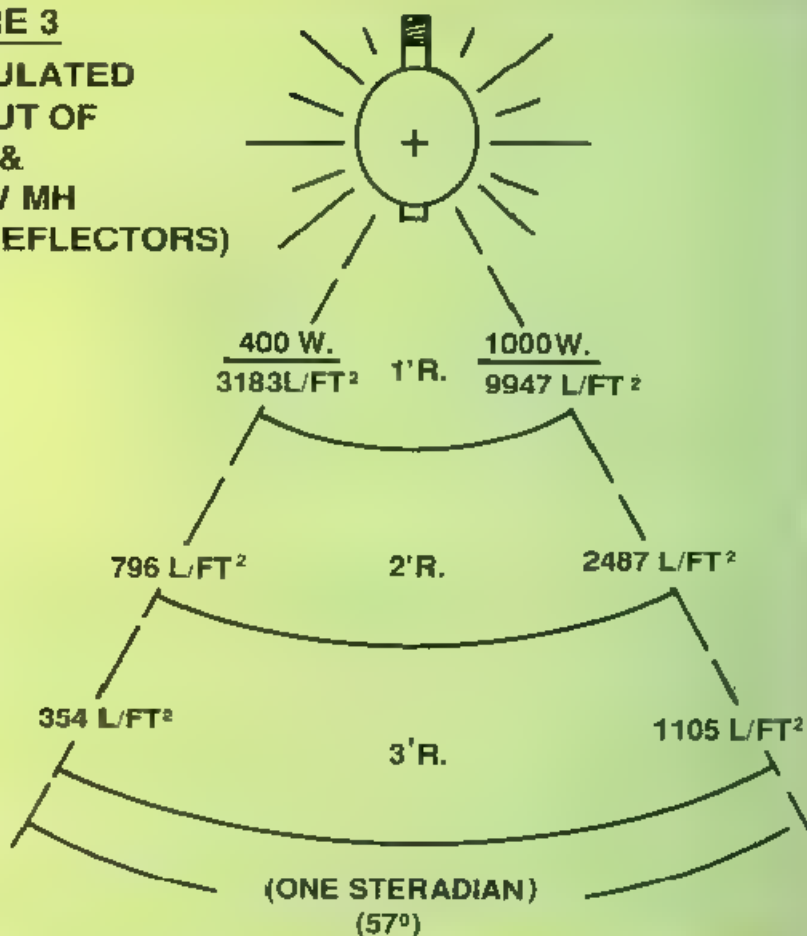
from the light source point to keep his plants uniformly lit. A light mover increases the area directly under the lamp (the 100% area) but the same is true the farther you get from under the lamp's track.

What this means to the average grower is that the tops of his plants should be progressively elevated to maintain the desired radius. For a single stationary light, the tops of the plants should make a shape like a bowl makes in the snow. For a light (or lights) on a light mover, the tops should make a shape like a doughnut makes in the snow or like a small valley. Obviously, most current hydroponics units do not allow side elevations required to maintain the desired radius. I have designed a simple and inexpensive, yet effective, hydro unit which can be arranged to utilize the light this way

Using 4" plastic drain conduit and elbows, a downward spiral can be constructed from the outside, draining from the lowest point at the center. Growing media can be held by plastic cups with drainage holes, placed in spaced holes along the conduits. (I prefer the feet of nylon stockings to hold the media; this allows better drainage and root growth.) A simple timed pump pours solution into the highest outermost end, and the solution follows the slow downwards spiral to the drain at the low center. Cost of this unit (which is infinitely

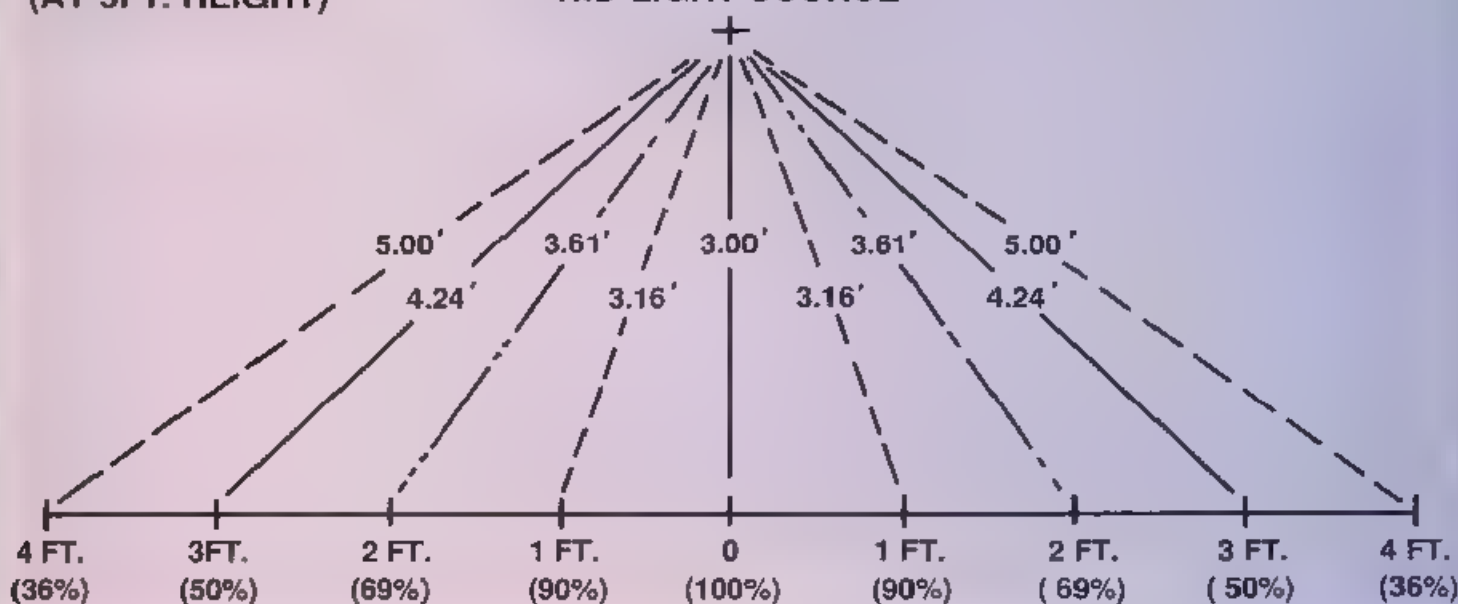
*continued on page 58*

**FIGURE 3**  
**CALCULATED**  
**OUTPUT OF**  
**400W &**  
**1000W MH**  
**(NO REFLECTORS)**

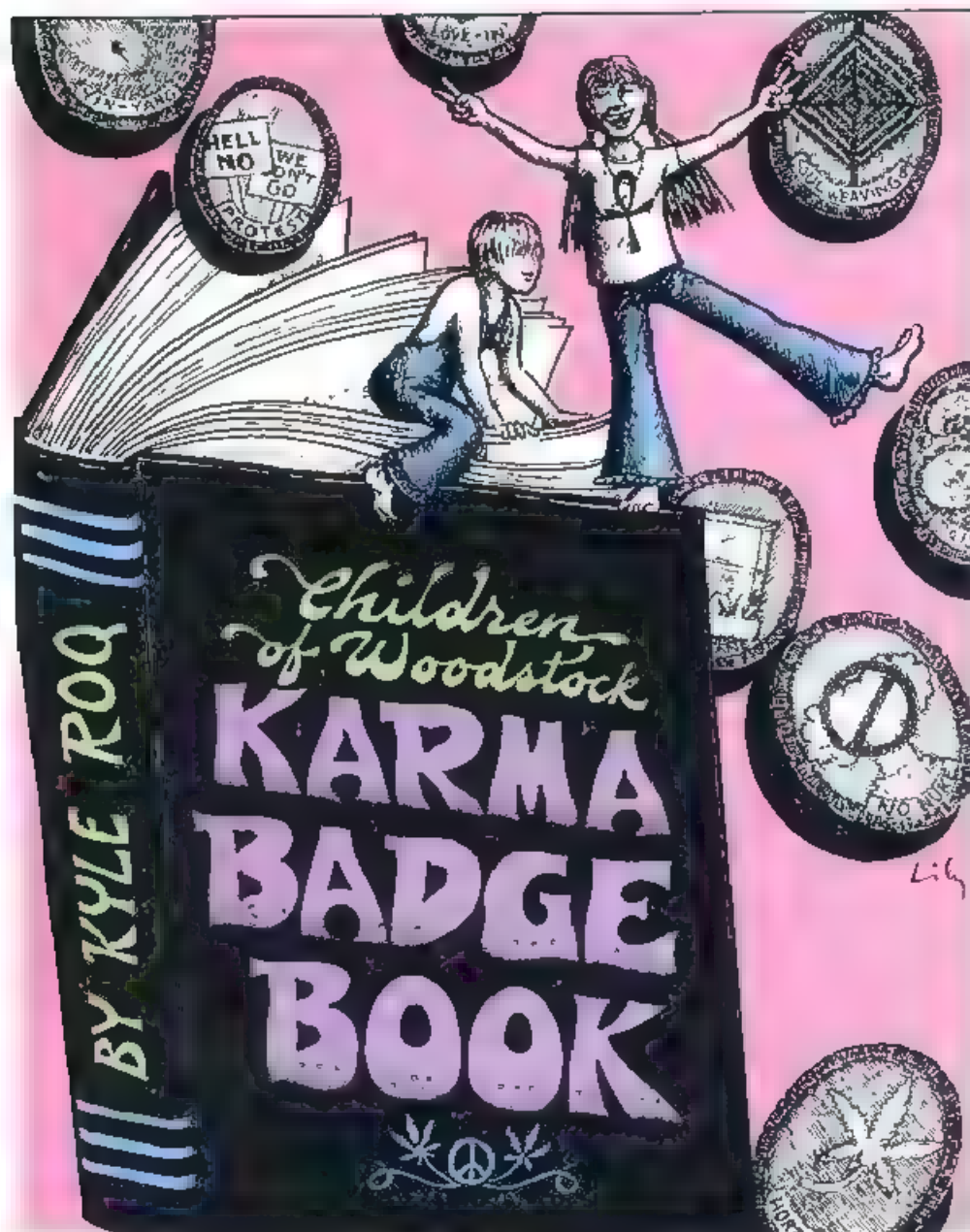


**FIGURE 4**  
**RADI FROM SOURCE**  
**TO OBJECTIVE**  
**ACROSS 8 FT. AREA**  
**(AT 3FT. HEIGHT)**

**HID LIGHT SOURCE**



# DO-IT- UR-SELF SEEDLING NURSERY



**Text and photos by Kyle Roq**  
**Illustrations by Lily Houston**

Like every aware Child of Woodstock, Heather and Donovan look forward to the day they will share the family stash. They know that sharing also includes the duties of keeping the stash fresh and full.

Projects you create, as Children of Woodstock, aside from heightening your Karma, will be useful as you evolve your space in the Woodstock Nation. This self-watering Seedling Nursery will free you from a daily watering routine, giving you time for other important things, like get-down serious playing.

You'll need two styrofoam trays, the kind that butchers used to put hunks of dead animals on, before everyone realized how uncosmic that was.

While Rockwool cubes are fantastic for cuttings, Jiffy 7 Starter Pellets work best in this seedling nursery. Different head. Trace the outline of a compressed Jiffy 7 onto one of the trays, seeing how many circles you can get in. Getting them close together uses light more efficiently, and makes it easier for seedlings to share the experience with their sisters and brothers. Try for 6 to 9 on a smaller tray.

Cut out the circles with a razor. Be careful; blades can be real bummers.

Place the top tray, with the cut-out circles, over the bottom tray. Trace the circles into the bottom tray. Experience the feel of styrofoam against both a hard-and-soft tipped pen. Weird, huh?

Polyester Rope is super absorbent, making it a terrific wick. It may not be totally natural, but hey, neither are Zip-Lock baggies. We used a diamond braid #6 (3/16" dia.), although any polyester rope probably shares the same qualities. Melt the rope ends with a match or joint lighter. It stops fraying, and makes it easier to get it through the pencil holes you're going to poke.

Soak the rope for half a minute in your commune's favorite, 6.3 pH vegging nutrient. Watch it gustfully suck up the solution.





*Nursery.*



*If you're not using an airstone, site on top of a washcloth and styrofoam tray to reduce the bubbling noise.*



*Bottom tray, wicked for six of nine holes. Note each rope segment goes into the reservoir on both sides of three plants.*



*Wick's eye-view of the top tray, with Jiffy Pot butts secured in the tray's holes.*

Feel it swelling, anxious to deliver nourishment to your little plants. Grok the rope. Inorganics have personalities too!

Feeding the rope through a pencil-poked hole in the bottom of the tray, route it through the outlines of three circles, and back into the nutrient solution, through another pencil hole. (It's important that each segment of wick serves no more than three circles between two pencil holes.)

Fit the Jiffys, with your just germinated plants, snugly into the holes in the top tray, their little butts mooning through, resting on the rope. Vacant holes can rest



*Wicks hanging down into reservoir.*

on tin foil to reduce algae and evaporation.

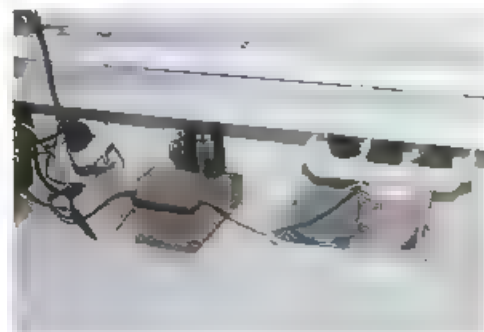
Rest the two trays on top of the reservoir; a quart-size, gelatin-free, yogurt container works nicely. The polyester wick hangs into the nutrient solution.

We've always kept the nutrient oxygen-rich, 24 hours a day, with a small aquarium pump. An airstone on the end of the line will keep it quieter, although it's not necessary. Punch a hole in the top of the reservoir to run the airline through. Tell your friends the sound is an aquarium of cavefish you keep in your closet, because they can't handle light.

With a quart-size reservoir



*Top Tray: Aluminum foil is placed under empty holes.*



*Complete nursery. Small computer fan plugged into the light timer protects against insects and makes the stem strong—even under fluorescents. Because of fluorescent's rapid light fall-off, the tops of the plants are about an inch or less from the tubes. The brightest part of a grow tube is its center area. White cardboard (not shown) leans against the shop light to reflect light back.*

you'll have to replace water lost in evaporation about every 2-3 days. A larger reservoir can go for longer periods. Fill to the original level with water only—not nutrients. When you change nutrients, dump the entire reservoir and start fresh.

Transplant your plants no later than their one month birthday—or before their curious roots start growing into the rope.

May you and your garden grow happy and high!

**FOOTNOTE LIKE.** When you complete this project, go on to your next Karma Badge exercise: Helping Elder Children Across Bad Trips. ●



# Five Years and Here to Stay



Haze x Northern Lights #5

**Special 5th year**

**F R E E**

**1989 Catalogue**

**Send name and address to:**

**The Seed Bank  
Postbus 5  
6576 ZA Ooy  
The Netherlands**

We offer top hybrids and pure strains from all over the world. Some recent discoveries include **Hawaiian Indica**, the amazing, exotic **Haze**, original **Afghanis** and the heavy yielding, pungent **Garlic Bud**. Our expanded 1989 catalogue includes these new varieties along with such classic favorites as **Early Pearl**, **Skunk #1**, **Big Bud**, **G 13** and **Hash Plant**.

**Fast delivery guaranteed.  
Check us out!  
You deserve the best there is.**

**MARIJUANA  
SHORTS !?**

**WARNING**

THIS PRODUCT CONTAINS AT  
LEAST 4 OZ OF ORGANICALLY  
GROWN, MOST DEADLY GENU-  
INE MARIJUANA FIBRE  
SMOKING  
BAKING  
SWALLOWING CAN BE DANGEROUS

**REMEMBER!**  
ONLY SAFE TO WEAR  
A PUBLIC SAFETY MESSAGE FROM  
JOINT VENTURE HEMPERY INC

**NEW TO  
AMERICA!**

**55% HEMP 45% COTTON**



**LIMITED OFFER**

NEWEST TO AMERICA! DIRECT FROM GROWER  
GOVT APPROVED! HIGHHHH QUALITY! 'COARSE, RAW'

CALL **1-800-544-0577** for FAST ordering

RELAX/STRETCH 25/32" 28/37" 33/43" 36/42" 41/47"  
SIZE: ☐ SMALL ☐ MED ☐ LARGE ☐ X-LARGE ☐ X-X-LARGE  
QUANTITY: ☐ 1 ☐ 2 ☐ 3 OR MORE (STATE AMOUNT)

NAME \_\_\_\_\_ ZIP CODE \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ TELE: ( ) \_\_\_\_\_

CREDIT CARD NO (VISA, M/C, AE CARD ETC.) \_\_\_\_\_  
PERSONAL CHEQUE \_\_\_\_\_ (EXPIRY DATE) \_\_\_\_\_

JPS Schwab NO C.O.D.'S PLEASE

AS/

SEND TO JOINT VENTURE HEMPERY INC P.O. BOX 26345, TEMPE, ARIZONA 85285-6345



**1-800-444-4378**

**Discount Halide & Hydroponics**

**FREE SHIPPING\***

**"one stop grow shop"**

**FREE CATALOG**

**LIGHTING SYSTEMS**

Complete with ballast, covered enclosure, super bulb reflector wired and ready. 2 year ballast warranty and 1 year bulb warranty

175w Metal Halide	\$115.00
400w Metal Halide	139.00
400w Metal Halide Horiz	149.00
1000w Metal Halide	179.00
1000w Metal Halide Horiz	189.00
50w High Pressure Sodium	110.00
400w High Pressure Sodium	189.00
1000w High Pressure Sodium	235.00

**BARE BONES KITS**

Includes ballast, super bulb, socket wired and ready

400w Metal Halide	\$115.00
1000w Metal Halide	155.00
400w High Pressure Sodium	167.00
1000w High Pressure Sodium	209.00

**REPLACEMENT BALLAST**

130w or 220w - 2 year warranty	
400w Metal Halide	\$ 68.95
1000w Metal Halide	78.50
400w High Pressure Sodium	105.00
1000w High Pressure Sodium	129.00

**BULBS - 1 year guarantee**

Metal Halide	
M175	\$99.95
MS 400 BL	35.00
MS 400 Horizontal	39.00
MS 800 BL	45.00
MS 800 Horizontal	55.00
MS 1000 BL Phosphor Coat	60.00
MS 1000 Horizontal	69.00

**High Pressure Sodium**

C 150	\$90.95
C 400	39.95
C 1000	67.50

**Conversion Bulbs - Work in metal**

halide ballast	
150 Conv lamp	\$ 59.00
360w High Pressure Sodium	\$ 65.00
940w High Pressure Sodium	139.00
Fluorescent Tubes	
94" Vita Lite	\$12.95
48" Vita Lite Powerwise	13.95
4" Fixture	12.95

**MYLAR 99% Reflective**

25'	\$15.95
50'	25.95
100'	49.95
White plastic 80' wide	85'

**LIGHT MOVERS**

4' or 6" Track	\$ 89.00
6' Extension	39.95
Multiplier - 2 arm	119.00
1 LS Sun Circle	39.00
2 LS Sun Circle	109.00
3 LS Sun Circle	159.00

**FANS & BLOWERS**

12" Wall Mount fan	53.95
16" Wall Mount fan	58.95
Exhaust Blower 60 cfm	39.95
Exhaust Blower 90 cfm	44.75
Exhaust Blower 140 cfm	47.25
Exhaust Blower 265 cfm	58.95
Exhaust Blower 465 cfm	79.95
Exhaust Blower 980 cfm	139.95
Cooling Thermostat for Exhaust Fans	17.95

**HYDROPONICS SYSTEMS**

Hydro-Flow I Complete	
36 Unit system	\$965.00
6 Unit add-on	16.00
Hydro-Cell II Complete	
12 Unit System	250.00
1 Unit add-on	6.00
Hydrofarm Quantum System	\$199.95

Professional Propagation System	169.00
Ebb & Flow Tray 44x24	35.95
Propagation Dome 44x24	39.95

**HYDROPONIC FERTILIZERS AND ACCESSORIES**

Fertilizer	
Grow Formula A 14-9-16	
Bloom Formula B 9-15-18	
1 lb	\$ 6.99
2 lb	12.99
10 lb	49.95

pH Test Kits 8 oz. pH up & down	315.95
pH Test Indicator	8.79
pH up & down 1 qt.	21.69
1 gal	59.95
Digital pH Meter	69.50
Dissolved Solid Meter	

**Rockwool - "Fertima One"**

Grow (7-0-5 Bloom (1-6-6))	
1 qt	\$ 8.95
1 gal	29.95
Micro Trace Elements	
1 qt	\$ 8.50
1 gal	29.50

**ROCKWOOL**

Ideal for Hydroponics

1" Cubes	\$ 08
1 1/2" Cubes	10
2" Cubes	15
3" Cubes	35
4" Cubes	55
6" x 3" Grow Slabs	5.25
8" x 3" Grow Slabs	7.50
12" x 3" Grow Slabs	9.50
30 lb Bale	
will fill 50 1 gal	24.95
46 lb Bale pH Balance	65.00

**CLIMATE CONTROL EQUIPMENT**

Climate Control - regulates Temp & Humidity	\$75.00
Cooling Thermostat	17.95
Humidistat	48.75
CO <sub>2</sub> Systems	
CO <sub>2</sub> Injection	\$189.00
CO <sub>2</sub> Generator 1900 cu. ft	269.00
Ozone	
Air Ease Ionizer	\$ 53.95
Zestron 1000 Ionizer	89.50
Zestron Collector Ionizer	99.95
Zestron 3600 Ionizer	320.00
Clean Air I Charcoal Filters	56.95
Clean Air II Charcoal Filters	129.95
Clean Air III Charcoal Filters	195.00

WE ALSO HAVE FERTILIZERS, PROPAGATION AIDS, BOOKS, TEST EQUIPMENT, GROWING CONTAINERS, INSECTICIDES, REFLECTORS & TIMERS

WE ACCEPT VISA, MASTERCARD, AMEX & C O D

\*All orders of \$300.00 or more receive free shipping (Some products not applicable)

All merchandise has a 1 year guarantee with 30 day money back guarantee

**1-800-444-4378 E. 14109 Sprague, Suite 5, Spokane, WA 99216**

**COD - No Problem!**

**Canadian Orders Welcome**

**Orders Shipped within 24 hrs.**

# WEIGHTS AND MEASURES

TABLE 1. SYSTEM INTERNATIONAL (SI) UNITS

PHYSICAL QUANTITY	NAME OF UNIT	UNIT SYMBOL	DEFINITION
BASIC SI UNITS			
LUMINOUS INTENSITY	CANDELA	CD	THE LUMINOUS INTENSITY IN THE PERPENDICULAR DIRECTION, OF A SURFACE OF 1/600 000 SQUARE METRE OF A BLACK BODY AT THE TEMPERATURE OF FREEZING PLATINUM UNDER A PRESSURE OF 101 325 NEWTONS PER SQUARE METRE
LUMINOUS FLUX	LUMEN	LM=CD/SR	THE FLUX EMITTED WITHIN A SOLID ANGLE OF ONE STERADIAN BY A POINT SOURCE HAVING A UNIFORM INTENSITY OF ONE CANDELA
ILLUMINATION	LUX	LX= LM/M <sup>2</sup>	AN ILLUMINATION OF ONE LUMEN PER SQUARE METRE

PHYSICAL QUANTITY	SI UNIT	UNIT SYMBOL
SI UNITS HAVING COMPLEX NAMES		
LUMINANCE	CANDELA PER SQUARE METRE	CD/M <sup>2</sup>

## LIGHT

*continued from page 53*

expandable) is less than \$75, including pump and timer.

The lumen value given for bulbs is the total spherical output, not what is actually shining on plants. Furthermore, that output is only a valid figure at one foot away from the lamp (a lighted area about the size of a small beach ball). A lumen is defined as the amount of light emitted by a single point source in a solid angle (one steradian). A footcandle, on the other hand, is the illumination received by a surface one foot away from a light source of one candela (a standardized candle), equal to one lumen per square foot. Footcandles change with distance, but lumens do not. A radian is an angular measure which looks like a piece of pie

A steradian is like the wedge you might cut from the end of a watermelon when you're going to spike it with alcohol for a party. There are 12,566 steradians in a sphere. At one foot from the bulb (a two foot diameter) there are 12,566 square feet in the surface of the sphere. This means that for a 125,000 lumen bulb (total), there are 9,947 lumens per square foot one foot from the bulb. At three feet from the bulb (a six foot diameter sphere), there are only 1,105 lumens available per square foot. This is just barely enough light for proper flowering *directly under the bulb*. As I showed earlier, any other spot in the grow area will receive even less light.

My reason for mentioning all this is that at the beginning of Jorge's article, he asks "How can the Dutch use 400-watt lamps and get the same (or better)

results than American growers using the 1,000-watt lamps?" His answer is horizontal orientation and small reflectors. He showed that a 1000W bulb's lumen-per-square-foot output can be increased by almost three to one over the theoretical (no reflector) figures. But Jorge did not chart any 400W bulbs, or even a horizontal 1000W MH. At any rate, even if the 400W can be boosted in a like manner, at the 36" distance we are still under the 1000 lumen-per-square-foot minimum recommended for optimum bud formation. So my main question is, can a small indoor grower, especially with a limited number of stationary lights, hope to achieve good results with even horizontal 400W bulbs? I realize that close to the plants, the intensity increases, but the area covered also decreases. ●



**NEVER TAKE  
A DRUG  
YOU DON'T  
REALLY  
UNDERSTAND**

Consider the powerful effects of drugs. Why use your body as a testing ground for substances you may know nothing about? It makes no difference if a drug is legal or illegal, for medicinal use or for recreation — you owe it to yourself to learn everything you can before taking it. The facts could save your life.

(A public service message from the editors of *High Times* magazine)

WHEN IT'S MORE THAN A HOBBY

KYLE ROO'S  
**SUPER  
BUDDY**

**NFT - EBB & FLOOD - AEROPONIC**  
BUDDY SYSTEMS HAVE THE ADVANTAGES OF ALL THREE!



ANY CONFIGURATION —  
EXPANDABLE RESERVOIR.  
98 ADULT PLANT MINIMUM  
IN 8' x 7' AREA.  
FULLY AUTOMATED  
AND PROGRAMMED.  
PORTABLE.

**UNLIMITED EXPANSION!**

THE BUDDY SYSTEM clones and grows in drinking cups, allowing Perpetual Harvest of individual plants anytime! No connections! A real Sea of Green!  
Roots are directly fed and oxygenated in a closed chamber for 15% quicker growth, by-passing grow media problems like shifting pH and excess humidity without nightmares from internal sprays. Minimal maintenance!  
SUPER BUDDY 98 \$995 • 300 Cup under \$1,800 • 1000 Cup under \$4,800!



**GOOD BUDDY XL-15**  
47" x 31" x 18" high.  
15 Gallon Reservoir.  
\$239.



**GOOD BUDDY XL-20**  
47" x 42" x 21" high.  
19 Gallon Reservoir.  
\$315.

**GOOD BUDDY XL-20**  
47" x 42" x 18" high.  
15 Gallon Reservoir.  
\$279.

BEYOND A  
THERMOSTAT / HUMIDIST

**ULTRASTAT™**

PROGRAMMED LOGIC CONTROL,  
CORRELATION AND MONITORING

UltraStat advance circuitry precisely balances CO<sub>2</sub> enrichment and ventilation in response to temperature, humidity and lights, creating the optimum cost-efficient grow environment.

CO<sub>2</sub> release is co-ordinated to lights and ventilation, while 24 hour ventilation is correlated to temperature and humidity. UltraStats are the lowest priced, professional environmental controller capable of all that. No wiring. Any wattage lights.

UltraStat 1999 Zoom into rapid growth for only \$215.  
UltraStat 1900 without humidity control \$149.

Yes, We have **PRIME** ammonia-free, power flower nutrient!

Don't sacrifice yield and quality for a quickie, ammonia "junk food" cosmetic fix!

High 5-18-12 and elevated trace lasts way longer than weaker liquids and provides a safety buffer. Break Thru One Part Formula!

Staggering results guaranteed or your money back on the unused portion.  
Makes 100 gallons. Only \$15.

**RAPID ROOT CONCENTRATE**— More than 153 times the strength of Hormex!  
More powerful than Hormex #8 powder. Lifetime 4 Oz. liquid. Only \$29.95.

COMPLETE SELECTION OF STATE OF THE ART GROW ROOM EQUIPMENT, BUDDY COMPONENTS, LIGHTS AND SUPPLIES — CALL YOUR SPECIAL FRIENDS AT HIGHER YIELD FOR ALL YOUR GROWING NEEDS!

**HIGHER YIELD**

EXCLUSIVE MAIL ORDER CENTER  
**800-451-1952 • CA 213-394-6777**  
HIGHER YIELD 712 Wilshire Blvd. Suite 12  
Santa Monica, CA 90401

Free catalog. Prices plus shipping. Store prices may vary. MC/VISA C.O.D.

LOS ANGELES SHOWROOM • 4527 San Fernando Road, Glendale, CA • 818-243-0068  
ROCKY Mtn. LIGHTING & HYDROPONICS • 7100 North Broadway Suite 5-S, Denver, CO • 303-428-5020

Ask for your **FREE** booklet — "Guide to Hydroponic Systems".

**FREE CATALOG**

800

**237-3759**

**412-471-7455**

**Call for CDD or Credit Card  
Orders or Send Credit Card  
Number/Exp. Date or Send  
Money Order With/Name,  
Address and Phone.  
Add \$3.00 Shipping.**



**No Sales to Minors  
Use Only as Directed  
Offer Subject to Change Without Notice**

QUICK LOG

**800-237-3759**

357

		Prices per bottle				
DECOMGESTANTS		Ephedrine	100ct	1,000ct	5,000ct	12,000ct
Mini White (Cross w/ thick or thin)	25mg	3 00	10 00	8 00	5 00	
Mini Pink Heart (with/ou G)	25mg	4 00	10 00	8 00	6 00	
Mini Pink Heart w/ith G	25mg		5 00	12 00	10 00	
Purple or Yellow Tablet	25mg	4 00	15 00	10 00	6 50	
Small Black or Yellow Capsule	25mg	5 00	20 00	18 00	16 00	
ENERGIZERS Tablets		Caffeine	100ct	1,000ct	5,000ct	12,000ct
White w/Green Blue or Red Specks	150mg	4 00	14 00	12 00	10 00	
Large Pink Hearts	200mg	4 00	16 00	13 00	11 00	
White 2D/20	175mg	4 00	18 00	16 00	12 00	
Blue 3D/30	75mg	4 00	18 00	16 00	12 00	
Magnum Pink and White	200mg	4 00	20 00	18 00	14 00	
Large Capsules						
Blue/Clear		200mg	5 00	25 00	22 00	18 00
Green/Clear		200mg	5 00	25 00	22 00	18 00
White or Black Mole		200mg	5 00	20 00	18 00	6 00
Small Capsules						
Yellow or Black		200mg	5 00	20 00	18 00	16 00
SLEEP AIDS			100ct	250ct	500ct	1,000ct
Orange Tablet (50mg Diphenhydramine)			5 00		15 00	25 00
DIET AIDS		PPA-HCL	100ct	250ct	500ct	1,000ct
Quick Loss. Strongest Available w/o a Prescription						
Yellow Film Coated Caffeine Free						
Time Release Caplet	75mg	5 00	10 00	18 00	25 00	
Red and Clear Capsule	75mg	5 00	10 00	15 00	25 00	
Fiber Diet And Fruit & Bran Fiber	5 00	10 00	18 00	25 00	25 00	
Grapefruit Tablet (25mg PPA, 20mg Vit C, 101 L Vit E 100mg Grapefruit Extract)		5 00	—	18 00	28 00	
COLD CAPSULES			100	250	500	1,000
70mg Caffeine, 25mg Ephedrine Sulfate, 2mg Chlorpheniramine Maleate, 50mg Phenylpropanolamine HCL						
		10 00	20 00	35 00	50 00	
Surfing Pills.		Surf Complex,				
Bottle of 80: \$12.95		Bottle of 90: \$17.95				
180: \$22.95		Body Building Catalog Available				
QUANTITY DISCOUNTS AVAILABLE						



**NATIONWIDE PURVEYORS, INC.**

P O. Box 8482, Department H, Pgh., PA 15220

Plant Hormones  
Amazing Results  
Totally Unique  
Absolutely Safe



**Plantastic**  
PLANT  
PRODUCTS

**Do you want more female plants with virtually no extra effort?**  
**Do you want to maximize your yield within the space you have?**  
**Do you want a product that works in soil or hydroponics, indoors or out?**  
**Are you using any plant hormones now?**

## SENSA-SOAK

Agerminating fluid to promote more female plants from the very beginning of cell division in the seed. Up to 95 % females produced in some tests. Contains a special cytokinin. Just soak your seeds.

## SENSA-SPRAY

Afoliar spray to increase female flowers and decrease male flowers. All it takes is to spray before the plants start blooming. Produces ethylene to force feminine traits.

## POWER BLOOM

Shortens vertical height  
eliminates wasted plant energy  
Encourages lateral growth. Pro-  
duces compact, sturdier plants  
with better overall vigor. Pro-  
motes more females with more  
numerous, bigger and earlier  
maturing buds

AVAILABLE IN MANY DIFFERENT SIZES

**PLANTASTIC** is now operating on a **WHOLESALE** basis only. Purchases must be made directly in person or by mail order from a nursery, garden supply or hydroponics store.

- ☐ Send me a **FREE** brochure with more information about the products
- ☐ Send me a list of the stores carrying **PLANTASTIC PLANT PRODUCTS**

MAIL TO: **PLANTASTIC PLANT PRODUCTS**  
1442A Walnut St. • Berkeley, CA 94709

INQUIRE AT YOUR LOCAL GARDENING SUPPLY FOR AVAILABILITY OF PLANTASTIC® PLANT PRODUCTS.

## STEPS continued from page 34

your style should be taken to heart if they are well-intended.

There are six major reasons why marijuana should be legalized--they are criminal, economic, sociological, constitutional, national security and health. In future issues of the magazine, we will cover each of them thoroughly. We will also make room for comments about your experiences fighting these unjust laws in the legislature. So get ready and get your suit and tie pressed. We're going to the capital in September and October.

One last experience. I was walking down the hall with the Special Assistant to the Attorney General. He had just given a talk about drugs. He had been talking about rehabilitating drug users and I said to him, "There is one difference between marijuana and almost any other drug, including the legal ones, alcohol and tobacco. If you ask a nicotine addict, alcoholic, junkie, crack freak, or almost any other drug user, 'If you could wake up tomorrow unaddicted and without cravings, would you take the option?', for the most part these people would say yes. However, if you ask a marijuana user the same question, s/he will say no thanks, because marijuana users, for the most part, do not think the substance is hurting them."

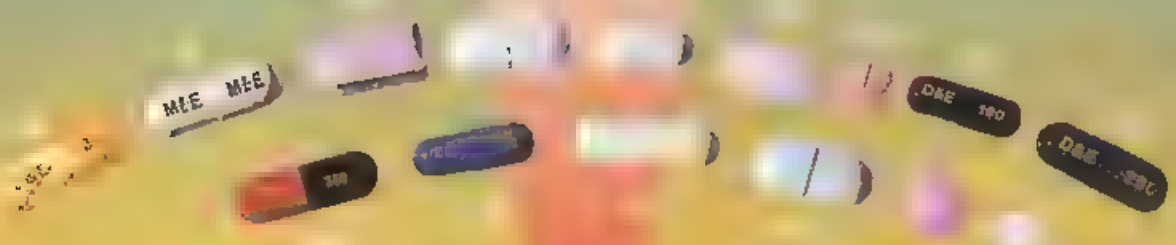
He said, "I never thought of that, but most of my friends who smoke it do feel the same way." A little bit of progress was made at that moment. ●

# STIMULANTS!



**AMPHETAMINE**  
 100mg  
 200mg  
 300mg  
 400mg  
 500mg  
 600mg  
 700mg  
 800mg  
 900mg  
 1000mg  
 1100mg  
 1200mg  
 1300mg  
 1400mg  
 1500mg  
 1600mg  
 1700mg  
 1800mg  
 1900mg  
 2000mg  
 2100mg  
 2200mg  
 2300mg  
 2400mg  
 2500mg  
 2600mg  
 2700mg  
 2800mg  
 2900mg  
 3000mg  
 3100mg  
 3200mg  
 3300mg  
 3400mg  
 3500mg  
 3600mg  
 3700mg  
 3800mg  
 3900mg  
 4000mg  
 4100mg  
 4200mg  
 4300mg  
 4400mg  
 4500mg  
 4600mg  
 4700mg  
 4800mg  
 4900mg  
 5000mg  
 5100mg  
 5200mg  
 5300mg  
 5400mg  
 5500mg  
 5600mg  
 5700mg  
 5800mg  
 5900mg  
 6000mg  
 6100mg  
 6200mg  
 6300mg  
 6400mg  
 6500mg  
 6600mg  
 6700mg  
 6800mg  
 6900mg  
 7000mg  
 7100mg  
 7200mg  
 7300mg  
 7400mg  
 7500mg  
 7600mg  
 7700mg  
 7800mg  
 7900mg  
 8000mg  
 8100mg  
 8200mg  
 8300mg  
 8400mg  
 8500mg  
 8600mg  
 8700mg  
 8800mg  
 8900mg  
 9000mg  
 9100mg  
 9200mg  
 9300mg  
 9400mg  
 9500mg  
 9600mg  
 9700mg  
 9800mg  
 9900mg  
 10000mg

**COCAINE**  
 100mg  
 200mg  
 300mg  
 400mg  
 500mg  
 600mg  
 700mg  
 800mg  
 900mg  
 1000mg  
 1100mg  
 1200mg  
 1300mg  
 1400mg  
 1500mg  
 1600mg  
 1700mg  
 1800mg  
 1900mg  
 2000mg  
 2100mg  
 2200mg  
 2300mg  
 2400mg  
 2500mg  
 2600mg  
 2700mg  
 2800mg  
 2900mg  
 3000mg  
 3100mg  
 3200mg  
 3300mg  
 3400mg  
 3500mg  
 3600mg  
 3700mg  
 3800mg  
 3900mg  
 4000mg  
 4100mg  
 4200mg  
 4300mg  
 4400mg  
 4500mg  
 4600mg  
 4700mg  
 4800mg  
 4900mg  
 5000mg  
 5100mg  
 5200mg  
 5300mg  
 5400mg  
 5500mg  
 5600mg  
 5700mg  
 5800mg  
 5900mg  
 6000mg  
 6100mg  
 6200mg  
 6300mg  
 6400mg  
 6500mg  
 6600mg  
 6700mg  
 6800mg  
 6900mg  
 7000mg  
 7100mg  
 7200mg  
 7300mg  
 7400mg  
 7500mg  
 7600mg  
 7700mg  
 7800mg  
 7900mg  
 8000mg  
 8100mg  
 8200mg  
 8300mg  
 8400mg  
 8500mg  
 8600mg  
 8700mg  
 8800mg  
 8900mg  
 9000mg  
 9100mg  
 9200mg  
 9300mg  
 9400mg  
 9500mg  
 9600mg  
 9700mg  
 9800mg  
 9900mg  
 10000mg



**CALL TOLL FREE: 1-800-221-1833**

IN NEW JERSEY CALL (201) 838-5254

## 3-Easy Ways to Order:

1. **Charge It** — Use Visa or MasterCard.
2. **C.O.D.** — We ship today and you pay on delivery.
3. **Send Payment in Full** — Add \$3.50 for Shipping and Handling.

(N.J. Residents add 6% Sales Tax - No Personal Checks, Please)

**D&E PHARMACEUTICALS, INC. 206 Macopin Road, Bloomingdale, N.J. 07403**



**SAVE!** — 10% Off  
 Buy 1000mg or more of  
 Cocaine or Amphetamine  
 to pay \$45.00

**EXTRA DISCOUNT!**  
 10% Off for Cash

**On-The-Go** National Express Delivery



# ASK

This month only I am awarding Garden of the Month Awards to three gardens which look very different from each other.

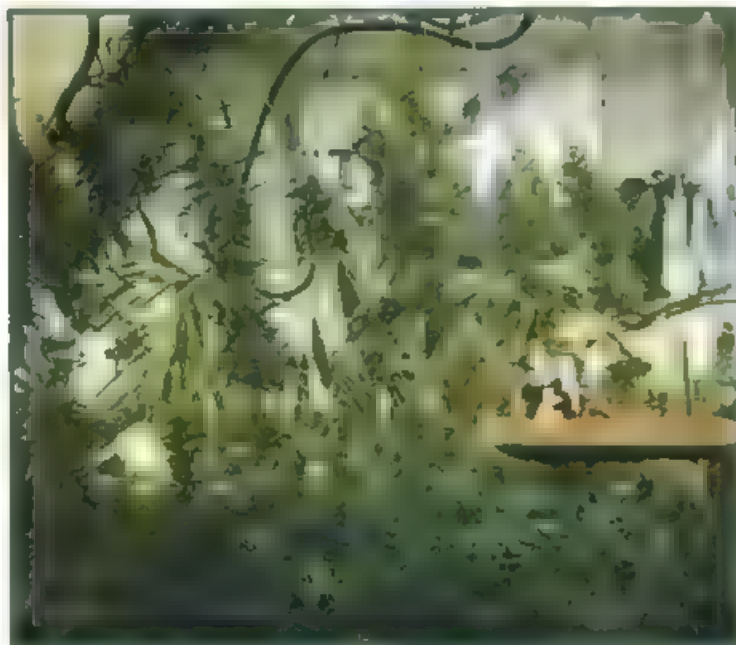


## GARDEN #1

These pictures are from my first attempt at growing marijuana indoors.

The garden was set up in a long rectangular closet using a 400 watt MH lamp, a Solar Shuttle, and a six module hydroponic unit. I grew two varieties, Northern Lights 5 x Skunk #1 and an excellent sativa which started from stash seed. As you can see, the results were outstanding. My only disappointment was a zero success rate at cloning my best females for my next crop. I even tried aerobic autocloning with no success. The cuttings stems started to rot before they rooted.

--The Closet Farmer  
Kansas City, MO



## GARDEN #2

My closet is 3' x 5' x 8', lined with mylar. I use a 400 watt MH and a 150 watt HPS for the top flowering section and power twists for the bottom vegetative section. My hydro set-up is custom made and very efficient. The garden yields one pound every 45 days of NL #1 and B5 x Sk #1.

My system uses a constant flow with return. In the veggie stage my clones grow 1" a day.

--Pepe the Beach Grower,  
San Diego, CA

# ED



**GARDEN #3**

These seedlings were planted in rockwool starter cubes and were started three weeks before the photos. The seeds were from stash. Mostly indicas with a few sativa plants.

I started the seeds under 1000 watt MH with continuous light for two weeks and then added a rotating light mover and a 1000 watt HPS. The 12 container system works great. The grow room is equipped with CO<sub>2</sub> enrichment, ionizer, vent fan, and climate controller.

The temperature rises to 90 degrees during the lighter part of the cycle and goes down ten degrees during the dark part. Humidity stays at 50%. I am using a grow formula fertilizer but plan to use a flowering formula when I turn the lights down.

--Dan E  
Western Iowa



**GARDEN #4**

We started in an 8 x 12 room using a 400 watt MH parabolic light. As time went by and the number of plants began to expand, we realized we needed more lights to cover all the plants. After countless rearrangements to accommodate them all, we finally got it right. Now we have a 1000 watt MH for the vegetative cycle and two HPS for budding.

We had our first taste of our female beauties just about four months after we planted the seeds. It had us smiling for hours. The taste is clean and refreshing and the highs beautiful. We don't have to depend upon anyone for our grass now and it feels great!

--The Happy Amateur Growers,  
Staten Island, NY

*continued on page 67*



## How To Grow

## MAGIC MUSHROOMS

by O.T. Oss &amp; O.N. Oeric

Drawings by Kat

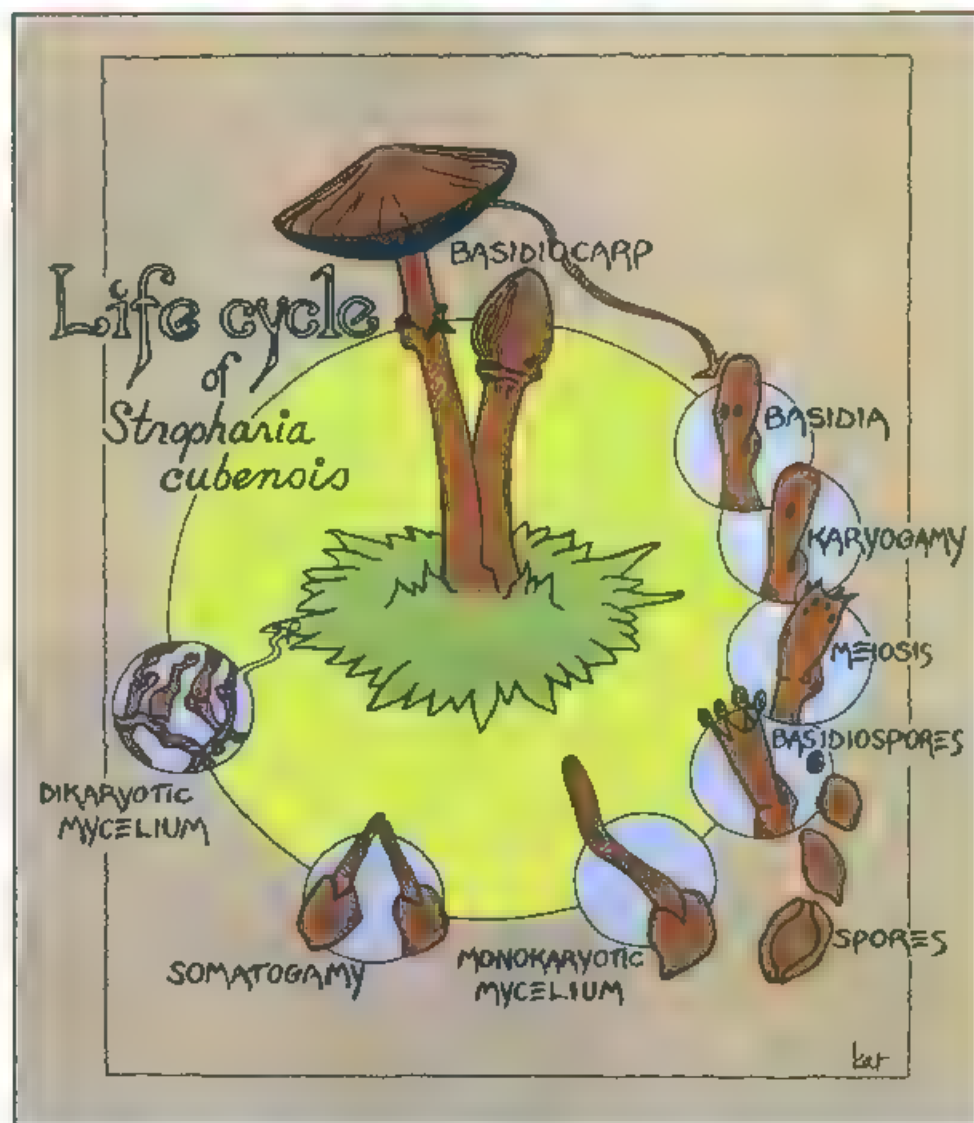
Photography by Irimias the Obscure

In the New World, *Stropharia cubensis* can be found in appropriate habitats throughout the Southern US, all through the coastal regions of Mexico, and throughout coastal and equatorial regions of South America. In the US, it has been reported from Texas, Louisiana, Alabama, Mississippi, Arkansas, Florida, Tennessee, and Georgia. Its distribution would probably be even greater were it not for the fact that its environmental requirements limit it to regions of mild temperatures and high humidity.

Because of its specific habitat and singular appearance, *Stropharia cubensis* is one of the easiest mushrooms to locate and identify. . . . It can be found growing out of cow-pies in pastures during rainy warm seasons. Other dung-growing mushrooms may also be found in the same pasture, but these bear little resemblance to *Stropharia*.

The flesh of this mushroom exhibits the property of staining a bluish color when bruised or broken. This blue-staining reaction is apparently an enzymatic oxidation of psilocin to an indole diquinone (Bocks, 1967) and is a fairly reliable indicator of the presence of psilocybin, not only in *Stropharia cubensis*, but also in other closely related genera (members of the family Strophariaceae) (cf. Benedict, et al., 1967). Other mushrooms, such as members of the genus *Russula*, section *Nigricantinae*, and *Boletus*, exhibit a similar blueing. The blueing in these cases, however, is not due to the presence of indole substrates and these mushrooms otherwise bear no resemblance whatever to *Stropharia cubensis* or related species (Singer, 1958, p. 247).

Once one has located a specimen or specimens of *Stropharia cubensis*, and been satisfied as to its identity in all particulars, it is necessary to collect spores for cultivation. Spores can be easily collected in the following manner: Take one or more fresh specimens with the caps fully open, using a sharp knife, cut off the stipe as close to the gills as possible (see fig. 2) and place the cap



gillside down on a clean sheet of white paper, and leave for 24 hours. It doesn't hurt to cover the caps with a small bowl while taking the spore print in order to prevent dessication. When the caps are removed, a dark-purplish, radially symmetrical deposit of spores will remain on the paper where the gills contacted it. The paper should then be folded and sealed in an envelope in order to prevent further contamination by airborne spores of other species of lower fungi. A single spore-print contains tens of millions of spores, and is sufficient to make hundreds of spore germinations.

The following variation on this method was suggested to us as a way of enhancing the sterility of the spore print: Take four standard flat microscope

slides, swab with alcohol, and flame in an alcohol flame or butane torch (fig. 1). On a clean flat surface, such as a table-top swabbed with Lysol, lay the slides side by side and end to end, so that they are arranged as in fig. 2. Place the fresh cap in the exact middle of the slides so that approximately 1/4 of the cap covers each slide (fig. 3). Cover and wait 24 hours. When the cap is removed, the end of each slide can then be sealed, together or separately, in plastic or paper. One can easily substitute glass microscope coverslips for the slides to maximize compactness. Do not use plastic coverslips, since static electricity associated with them makes it difficult for the spores to adhere to them.

Once the spore-print has been



collected, it is necessary to germinate some spores in order to begin the life cycle that will eventually culminate in the production of more mushrooms. Before we outline procedures for germinating the spores, a brief discussion of the stages in the life cycle of these higher fungi follows, readers who do not care to read this somewhat technical portion may skip the next three paragraphs.

All gilled fungi are members of the class Basidiomycetes, i.e., they are characterized by the production of spores on club-shaped appendages called *basidia*. Spores borne on basidia are called *basidiospores*. Most of the conspicuous fungi that one encounters, such as mushrooms, puffballs, and bracket fungi are members of the subclass Homobasidiomycetes. Of the members of this subclass, the gilled mushrooms are placed in the order Agaricales. The basidiospores germinate to form a monokaryotic hypha. A hypha is a tubular filament, an aggregation of these hyphae collectively comprise a mass of thread-like filaments referred to as the *mycelium*. The mycelium comprises the main body, or *thallus*, of the fungus. The stalked, capped structure which we call the mushroom is actually only the "fruiting body" or the spore-producing

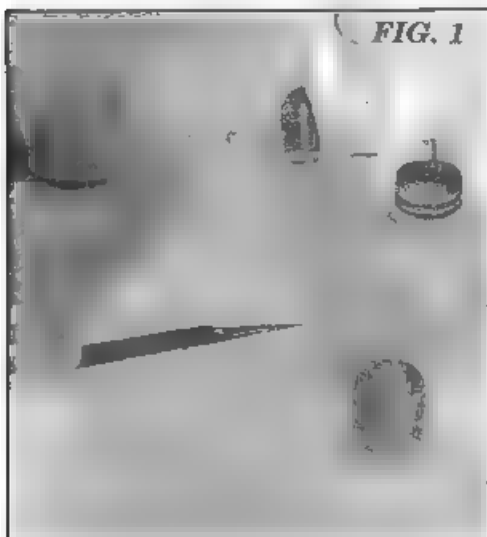


FIG. 1

#### Sterilizing the slide.

reproductive structure, and constitutes only a small portion of the total mass of the fungus, the great bulk of the organism exists underground in the form of a network of mycelium, which occasionally "fruits," or produces mushrooms, under appropriate conditions.

The basidiospores germinate to produce a *monokaryotic* mycelium, i.e. a mycelium grows out until it encounters another monokaryotic mycelium, germinated from another spore, that is a compatible mating type. If the monokaryotic mycelium does not contact a compatible monokaryotic mycelium, it eventually dies. In situations where two compatible monokaryotic mycelia do make contact, however a process called

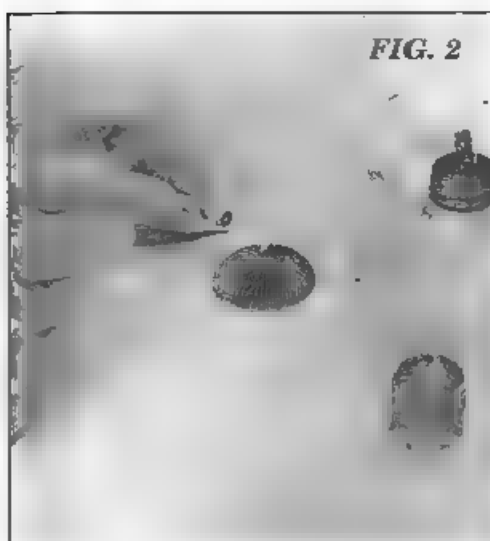


FIG. 2

#### Decapitation.

*somatogamy*, or the fusing of the somatic cells of the two mycelia, takes place, *but fusion of the nuclei does not take place*. The result of somatogamy is the establishment of a *dikaryotic* mycelium, i.e., a mycelium possessing two nuclei, one from each of the monokaryotic mycelia, in each of its cells. The dikaryotic mycelium stage is the most prolonged portion of the life cycle and is also the main assimilative stage of the fungus. The dikaryotic mycelium can propagate vegetatively indefinitely without going through a sexual (spore-producing) stage. Given appropriate conditions, however, the dikaryotic mycelium can be induced to "fruit"—the un-differentiated mycelial thallus of the fungus begins to weave itself together into an articulated, spore-bearing "fruiting body," in this case, into a mushroom. The mushroom continues to enlarge and thrust above the ground, incorporating more and more mycelium while at the same time expanding by absorption of water. At a certain stage in the growth of the mushroom, or *basidiocarp*, club-shaped structures called *basidia* form on the underside of the gills. At this point, *karyogamy*, or fusion of the two nuclei of the dikaryotic mycelium takes place within the basidia. This is the only *diploid*, or  $2n$ , stage in the life-cycle of the fungus, and is also the briefest stage, for meiosis, or reduction division of a diploid ( $2n$ )

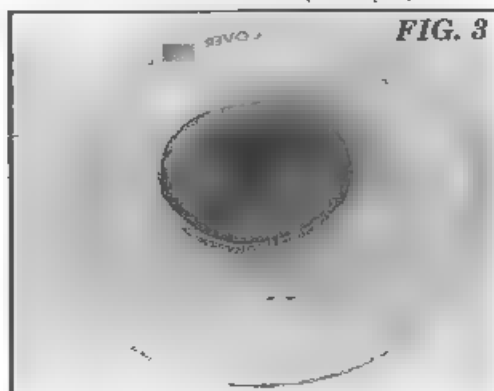


FIG. 3

Making spore print (note slide arrangement)

nucleus to 4 haploid ( $n$ ) nuclei occurs immediately following karyogamy. The result is the basidium bearing four basidiospores on its outer surface as in the "Life Cycle" drawing. These basidiospores eventually detach from the basidium to begin the life cycle again.

Fungi of the family Strophariaceae, which includes *Stropharia cubensis* and most other psilocybin-containing genera, are genetically complex with respect to the mating compatibility of different monokaryotic mycelia. These fungi are *heterothallic* and *tetrapolar*, that is, their sexual cycle is dependent on the fusion of two compatible monokaryotic mycelia, and their sexual compatibility is governed by two sets of factors.

In tetrapolar heterothallism, two sets of factors, the A's and B's, are involved. If a sexually reproducing thallus is to be established, somatogamy must occur between mycelia differing in both sets of factors—for example AB x ab. The number of mating classes is somewhat greater than in bipolar forms, since four types typically arise from spores of a single basidiocarp. Obviously these mating types, numbering in the hundreds

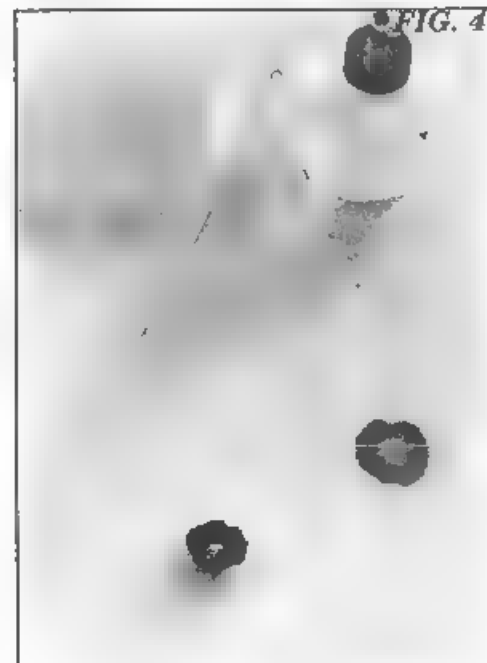


FIG. 4

#### Completed spore print and inoculating equipment.

In both bipolar and tetrapolar species, cannot be designated as sexes! (Scagel, et al., 1967, p. 69.)

Keeping this information pertaining to the sexual characteristics of these fungi in mind, let us return to the problem of spore germination, the relevance of our digression into the matter of life cycle and sexual compatibility will be seen shortly.

Once one has obtained a spore print from *Stropharia cubensis*, the monokaryotic mycelium can be easily obtained by germinating the spores on an appropriate solid nutrient medium, such as Potato Dextrose Agar or Malt

**Extract Agar** Simply assume that one has several clean, sterile petri plates which have been filled with an appropriate solid nutrient medium (see fig. 4). Spores can be transferred most readily using a clean, sterile #11 scalpel, inoculating loop, or similar instrument. Flame the blade of the scalpel in an alcohol flame, then reach into the petri dish and cut a small square of agar (2-3 mm) from the center of the dish. Spear the agar square on the blade of the scalpel, and use it to lightly touch the surface of the paper or slide on which the spore-print is deposited. Replace the agar square on the medium close to the place it was cut. It is sometimes convenient to inoculate four agar squares in each dish, one in each quadrant. Care should be taken to do this as quickly as possible, keeping the cover off the petri plate for the shortest time necessary, in order to minimize the chances of contaminating the plate with the airborne spores of



FIG. 5

#### **Flaming the inoculating loop.**

A variation on this method can also be used. Instead of scraping the spores directly onto the plate, they can first be scraped into about 10 ml of sterilized water. Shake this vigorously, then dilute to 100 ml by adding sterile water. Using a sterilized pipette or syringe, take up 2-3 ml of diluted spore solution, and point-inoculate the petri plate by placing a drop of the solution at two or three separate points on the plate.

If possible, incubate the covered inoculated plate at 86° F. for 24 to 36 hours. This will break dormancy and force the spores to germinate faster. Spores will germinate without this incubation, but may take up to 24 days. During this time, the spores will germinate and monokaryotic mycelium will grow radially outward from each point of inoculation. The plate should be left undisturbed until the mycelia from two different spores or two different



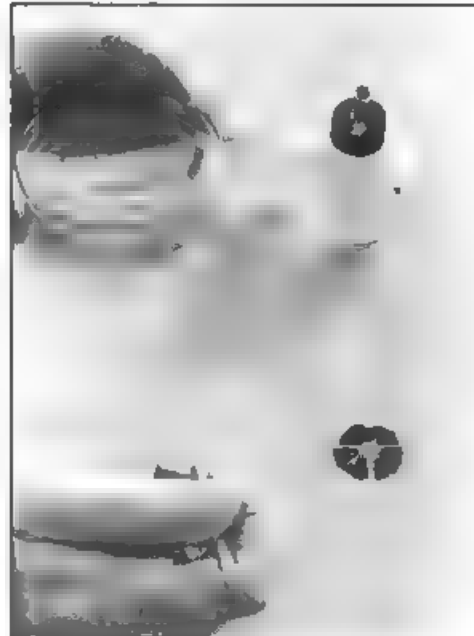
FIG. 6

#### **Touching inoculating loop to spore print.**

points of inoculation have grown together and made contact. A few days after contact has occurred, one can be reasonably sure that somatogamy has taken place and that a dikaryotic mycelium has been established. Since in practice one transfers clumps of spores rather than single spores onto the plate, waiting for two different inoculation spots to make contact is not really essential, by the time mycelial growth is well established on the plate, one can be confident of isolating dikaryotic mycelium.

In cultivating the fungus to the fruiting stage, one works primarily with a single strain of dikaryotic mycelium. However, because spores of several different mating types are produced by a single mushroom, a petri plate inoculated with spores will have possibly several dozen different strains of dikaryotic mycelium growing on it. It is therefore necessary to isolate one of the strains so that one can grow out stock inocula from a single, uniform strain. This can be accomplished using a scalpel, dissecting

needle or inoculating loop in which the loop has been bent to form a hook (fig. 7). The implement is first sterilized in an alcohol flame, then the petri plate is opened slightly and a very small piece of mycelial tissue is snagged on the end of the blade, needle or hook, and transferred rapidly and deftly to a second clean sterile petri plate containing an appropriate solid nutrient medium. Dikaryotic mycelium is isolated using exactly the same techniques as are used in transferring mycelium from one petri plate to another. By selecting a very small piece of tissue in this way, one can be reasonably sure that only one strain of dikaryotic mycelium is being removed and isolated. In practice we find that both isolation of a dikaryon and plate-to-plate transfer of dikaryotic mycelium once isolated, can be most easily accomplished using a sterile #11 scalpel. Small agar squares can be cut from the edge of the mycelial thallus and



#### **Inoculating petri plate with spores.**

transferred to fresh petri dishes.

The dikaryotic mycelium thus isolated from the spore-germination plate will grow outward in all directions from the point of inoculation on the new plate and should cover most of the surface of the medium within 8-12 days. One can then go ahead and make further transfers to new plates with a fair degree of certainty that one is working with a single strain of dikaryotic mycelium.

It is probably advisable to isolate several different strains of dikaryotic mycelium onto separate plates by taking tissue from different sections of the spore-germination plate. Different strains isolated from a single spore-germination plate should be identified by labels and compared for vigor of growth and vigor of fruiting ability, so that, through observation and trial-and-error, the strain showing maximum vigor in

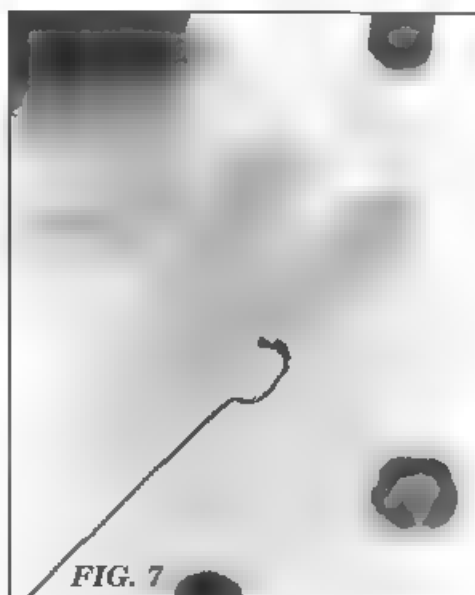


FIG. 7

#### **Hooked inoculating loop with adhering spores.**

*continued on page 77*

# ASK-ED

continued from page 63

## UNDERGROUND GARDEN

With a new baby and nosey relatives joining my household I had to move my closet garden. My only choice, besides a hot attic, was the crawl space.

First I dug a hole 4 1/2' x 4 1/2' and made it 1 1/2' deep for lots of headroom for the plants. I spread the dirt around the rest of the crawl space and then covered the entire area in plastic. (That keeps you clean later.) I constructed a cardboard room around the hole, sealing it with window caulking, and installed electrical outlets and an intake-and-exhaust fan using dryer duct hose. The light can be raised between the rafters if necessary. To water the plants I drilled a small hole through the floor of a nearby closet. A 5-gallon bucket with a small hose in the bottom is hung in the closet and the hose is put through the hole in the floor. Water flows in by gravity. I have had excellent results.

My clone room is about ten feet from the flower room, in another crawl space. If I pollinate the females, will the pollen affect my clones which are growing under an 18-hour light cycle? A few clones have pre-flowers.

--The Mole  
Clinton, IL

The clones with no flowers cannot be pollinated. The plants which are pre-flowering might get some seeds. To decrease the possibility of pre-flowering, raise the number of hours of light the clones receive each day.

## MALE FLOWERS

Two weeks from harvest we noticed seeds on the bottom half of our plants. Upon closer inspection we saw male flowers. The flowers appear just as the buds are about two weeks from harvest on otherwise female plants. What causes it and what should we do?

--Mr. Flower  
Spokane, WA

The flowers occur normally on many plants as they reach maturity. There is nothing to be done but inspect the plants carefully on a regular basis and pick off the flowers.

These flowers may very well contain all female pollen. Seeds resulting from it may produce all female plants.

# Need NEW ID? PRIVACY?



How to get new ID from government sources. State ID's, Birth Certificates, Drivers Licenses, new SSN, Passports, Diplomas, Degrees by mail. Get better jobs. Cover negative records. Solve fingerprint problems. Disappear. Start life over!

#1 ☐ \$17.95



Clear bad credit. End debts. Establish new credit. Receive all kinds of credit cards. Establish new credit. Clever credit maneuvers. All your "credit rights" and more!

#2 ☐ \$12.95

**HOW TO BEAT THE BILL COLLECTOR.** Sharpest rules of the credit game.

#3 ☐ \$7.95

**100 WAYS TO DISAPPEAR.** Inspiration for privacy.

#4 ☐ \$5.95

Create your own privacy! Discover best low-profile methods. Financial privacy. Cash income opportunities. Banking alternatives. Secret hiding places. Avoid violence, surveillance. Hide your assets. Protect mail, telephone. Using other "names." Disguises. Codes. Hideouts. Deep cover. Multiple addresses, and more!

#5 ☐ \$18.95

More on new identity. Legal name changes. How to disappear using legal changes. Adopt an alias. Laws on fake ID. "Take-over" ID. Codes used on drivers licenses, SSN, military SPN. Avoid passport problems. Do-it-yourself ID. Sources of private-issue ID. Much more!

#6 ☐ \$19.95

**SPECIAL COMBINATION OFFER**  
SAVE 40%! All 6 Books only \$49.95 ☐

Total of Order: \$ \_\_\_\_\_  
(Calif. residents add 6% sales tax)

Postage & Handling { Fourth Class ☐ 2.00  
(Your choice) { FIRST CLASS ☐ 5.00

TOTAL: \$ \_\_\_\_\_

☐ Send current Book Catalog - FREE

SEND TO

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

EDEN PRESS • 11623 Slater "E" • Box 8410-TH • Fountain Valley, CA 92728

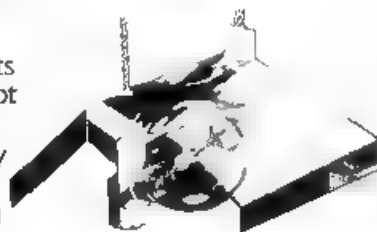
## what other indoor lights wish they could be:

### MAXIMUM!

The horizontal light with the engineered ballast box that costs more because it's built better.

Not just built with UL components but built to UL specifications. So it's not only safer but reflects more light onto your plants—which is the only reason to buy a light anyway!

**MAXIMUM** lights are available in: Metal Halide 250, 400 and 1000 Watt and High Pressure Sodium in 150, 400 and 1000 Watt



**For FREE Catalogs Call 800-255-0121**

For local New York & free advice 718-727-9300

or write, ECH, 432 Castleton Ave., Staten Island, NY 10301

—And also from EAST COAST HYDROPONICS—

A Full Line of INDOOR/OUTDOOR GROWING SUPPLIES

**Call for Mail Order: EAST COAST HYDROPONICS**  
**or VISIT THESE MAXIMUM SHOWROOMS**

Woodbridge, VIRGINIA, Home Harvest Garden Supply, 13624 Jefferson-Davis Highway, (703) 494-2917

York, PENNSYLVANIA, Great Bulbs of Fire, 56 South Duke Street, (717) 846-1630

Staten Island, NEW YORK, East Coast Hydroponics, 432 Castleton Avenue, (718) 727-9300



# QUICK INFO

**Marijuana Grower's Guide.** Mel Frank & Ed Rosenthal. This comprehensive survey of cannabis botany offers an overview on both indoor & outdoor gardening.

**\$19.95**

**Ed Rosenthal's Growing Tips.** Share Ed's observations about a wide range of cannabis topics - cultivation, travel, politics, & much more. Spiral Bound

**\$15.95**



**Marijuana Grower's Insider's Guide.** Mel Frank. Covers many aspects of cultivation in easy to understand terms.

**\$19.95**

**Cannabis Alchemy.** D. Gold. Uncovers modern techniques used to enhance potency & make superior hashish.

**\$14.95**

Marijuana Grower's Guide **19.95**

Growing Tips **15.95**

Mar Grow.'s Insider's Guide **19.95**

Cannabis Alchemy **14.95**

## SPECIAL OFFER

Order 2 books - Deduct \$2 3 books - Deduct \$4

**SUBTOTAL**

CA residents add 6 1/2% salestax

UPS and handling **\$4.00**

US Postage add \$2 (optional)

**TOTAL**

**CHARGE BY PHONE**

**1-800-428-7825 Ext. 102**

Name \_\_\_\_\_

Address \_\_\_\_\_

Enclosed ☐ Check ☐ Money order for \$ \_\_\_\_\_

Credit Card # \_\_\_\_\_

Exp. Date \_\_\_\_\_

Signature \_\_\_\_\_

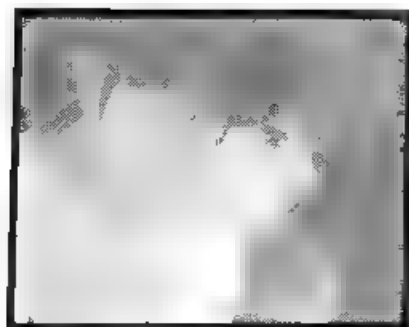
Mail to

**Quick Trading Co.**

P.O. Box 477, San Francisco, CA 94101

## XX RATED JAPANESE ANIMATION VIDEOS

NEW IN THE SUMMER 1989  
EDITION OF THE RIP OFF PRESS  
MAIL ORDER CATALOG!



"You've never seen anything quite like this. It's like 'Speed Racer Meets Cherry Poptart'."

PLUS PLENTY OF FAR-OUT  
UNDERGROUND COMIX, T SHIRTS,  
POSTCARDS, BOOKS AND A WHOLE  
LOT MORE! Subscribe now! (4 issues,  
inside USA only) Send one dollar to:

**RIP OFF PRESS, INC.**  
P.O. BOX 4686  
AUBURN, CA 95604

# DETECT PLANT SEX



Don't Waste Growing Space  
Get Rid of Male Plants.

**GROW ONLY  
FEMALE PLANTS**

Each Female Plant Detection Kit Contains  
Everything You Need to Detect the Sex of Ten Plants.

WORKS ON ALL PLANTS

- Just Starting or Full-Grown
- Outdoors or Indoors
- All Seasons

**100% EFFECTIVE**

**SATISFACTION GUARANTEED OR  
YOUR MONEY BACK**

### RUSH ME

- ☐ 1 KIT \$7.95
- ☐ 2 KITS \$13.95
- ☐ 4 KITS \$19.95
- ☐ 8 KITS \$34.95
- ☐ 20 KITS \$79.95
- ☐ 100 KITS \$345.00

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_

Deser Botanical Research and Study Group  
P.O. Box 7665 Stanford, CA 94305

NOW AVAILABLE IN EUROPE, TOO  
Ask for one at your local shop

# Ask-ED

## OVERFERTILIZATION

I am growing plants in my closet using four 4-foot fluorescents. I have been watering the plants daily with one teaspoon Hyponex 15-30-15 and a little high-nitrogen bat guano in a gallon of water. I use this everytime I water. My first problem was brown dead leaf-tips curling up and some yellowing of the bottom leaves. I diagnosed this as a magnesium deficiency and added some epsom salts to the water. The problem cleared up.

Now the plants are dying fast. The leaves are drying up and curling down at the sides. This is affecting the plants, one after another. It happens so quickly that there is no way to revive the plants. What is happening?

--Kenny

Goodspring, TX

The plants are overfertilized. When the salts from the fertilizers become more concentrated in the soil than the salt concentrations in the plants, the plants wilt as water is drawn back to the soil.

Wash the planting mix thoroughly by rinsing it in lukewarm water. This will wash away excess nutrients.

## WHEN TO FLOWER

I started using rockwool and other hi-tech growing techniques and the plants grew like crazy. In six weeks the plants averaged four feet. Now I hesitate to turn down the light cycle too soon, because I always thought that age had more to do with potency than size. When should I take clones and turn the light cycle down?

--J.P.

Chicago, IL

Neither size nor age have much to do with potency. The maturity of the plant is the key factor. Maturity is determined by the light cycle, since flowering and bud formation occur when the lighted part of the cycle goes down to 12 hours or less.

Take the cuttings immediately and place the plants into flowering quickly.

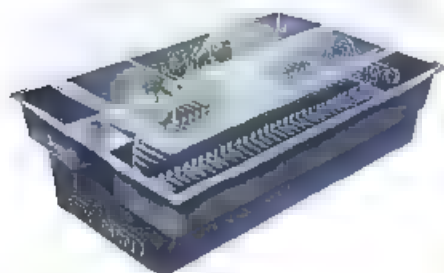
I would suspect with a growth rate that fast, that you may be growing an untamed sativa with long internode spacing. One of the shorter indoor commercial varieties would probably be easier and more rewarding to grow.

continued on page 75



## BUDWEAR!!!

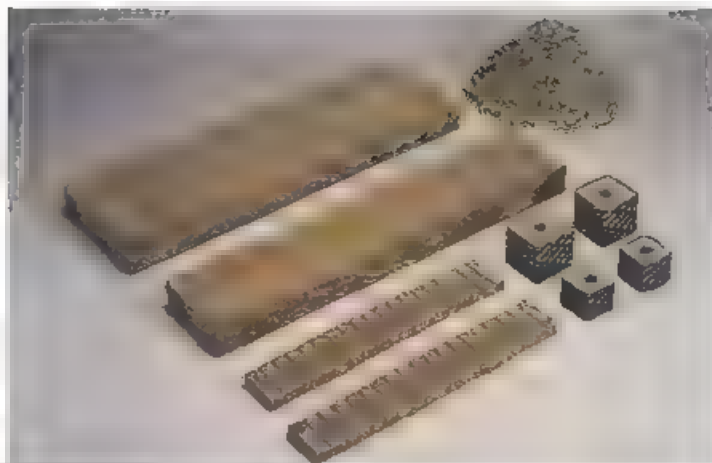
For the extremist in all of us come the Killer Buds! Not just good smoking, they're smoking fashion! Printed on white, 100% cotton t-shirts, choose from Skunk E. Budd or "Attack of the Killer Buds--The Motion Picture," featuring all of your sticky green favorites; The Killing Crew, The Killer Ganja and The Killer Hawaiians, all for only \$13.75 each. Write to **Muzik Mart, PO Box 1662, Oceanside, CA 92054**. Or call in your Visa/Mastercard orders at (619) 722-3920. Wholesale? Yeah, Mon!



## EBB & FLOW TO GO...

Here's another bright idea--**Hydrofarm's** new Ebb & Flow system. Designed by **Applied Hydroponics** to work with their popular Quantum's 25 gallon reservoir the system comes complete with all the necessary hardware, plus rockwool and nutrients. Made of heavy duty plastic, it has a multi-ridged pattern that insures even irrigation and drainage. It holds up to 56 large rockwool cubes, 450 starter cubes or three rockwool slabs; perfect for cuttings or full-sized plants. With its optional clear humidity cover--The Super-Dome™--the unit becomes a huge 14" greenhouse that's just right for your precious starts. For a free catalog and more information, see their ad on pages 7-9 and call **Applied Hydroponics East at 1-800-227-4567** or **Applied Hydroponics West at 1-800-634-9999** or visit your nearest authorized **Hydrofarm** retailer.

# PRODUCTS



## GROW WITH THE BEST

Agriwool substrates take you into the 21st century in technological advances in agriculture. Agriwool products have more than 95% porosity and retain 60% of water by volume, to provide adequate oxygen to the root system. Key features are: stable pH value, completely sterile and free from bacteria and pests, consistent densities. Agriwool is an excellent medium for cuttings and is completely non toxic. Contact your nearest dealer for details, or contact **Dansco Distributors, (206) 282-7282** for a list of dealers in your area.



**D&E Pharmaceuticals** is offering a new addition to its line, **EPHEDRINE PLUS**, the purest quality ephedrine sulphate available on today's market. Ephedrine is a known bronchodilator to relieve shortness of breath, however, caution must be advised since due to the high quality of this capsulized powder some users may experience sleeplessness, nervousness and loss of appetite. Normally \$24.95/1000 or \$7.95/100 we're offering a special **HIGH TIMES** introductory discount--simply call **1-800-221-1833** or in NJ **(201) 838-5254** and ask for Dept HT989 and get 20% off our regular prices. To see our complete line simply turn to page 61 or call for a free 24 page catalog. Quantity discounts available. Please add \$3.50 for shipping and handling. **D&E, Inc. Dept HT989, 206 Macopin Road, Bloomingdale, NJ 07403.**



THE SEED BANK

Winner  
in all  
categories

The Seed Bank  
Postbus 5  
6576 ZA Ooy  
The Netherlands

General Champion 1989



Dry Monopole

DRY



# Join the Freedom Fighters and earn a chance at becoming a judge at the 1990 Cannabis Cup Awards in Holland.

Next year, the most decorated member of the Freedom Fighters will join Ed Hassle and HIGH TIMES at the world's greatest marijuana harvest festival. However, to become eligible for this great honor, you must join the Freedom Fighters. All money raised by this group goes to support cannabis protests across the country.

Your \$15 annual membership dues entitle you to a year's subscription to the Freedom Fighter Newsletter as well as invitations to special HIGH TIMES parties, protests and other events.

Send your \$15 check or money order payable to the Trans-High Corp. to: Ed Hassle Freedom Fighters, 211 East 43rd St., NYC 10017.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

NOTE: THIS NEWSLETTER WILL BE MAILED IN A PLAIN UNMARKED ENVELOPE WITH NO RETURN ADDRESS. THE MAILING LIST WILL BE KEPT COMPLETELY CONFIDENTIAL.

## UNCLE SAM WANTS YOU!

### TO JOIN NORML AND WORK FOR LIBERTY AND JUSTICE FOR ALL!

Sam Says, "Be sure to attend NORML's 2nd Annual Fall Festival Concert and Membership Rally on Saturday, September 23rd and the 19th Annual National Conference September 22-24, both in Washington, DC. Call NORML for more info."

NORML is the National Organization for the Reform of Marijuana Laws. NORML works to educate the public about marijuana. NORML needs your help. Send your membership dues or tax deductible donations to NORML, Suite 640, 2001 'S' Street NW, Washington, DC 20009.

Be sure to attend NORML's 19th Annual National Conference in Washington, DC Sept. 22-24! Also, NORML's 2nd Annual Fall Festival is scheduled for Saturday, Sept. 23rd, beginning at noon at the Washington Monument in Washington, DC! And don't forget the annual Madison, WI Harvest Festival on September 30! We'll see you there!

LEGAL REFERRALS AVAILABLE: CALL (202) 483-5500.



OKAY, SAM! SIGN ME UP AS A MEMBER OF NORML! I WANT TO JOIN THE FIGHT TO END MARIJUANA PROHIBITION!

#### ANNUAL MEMBERSHIPS:

- ☐ \$50 SUPPORTING MEMBERSHIP
- ☐ \$35 FAMILY MEMBERSHIP
- ☐ \$25 REGULAR MEMBERSHIP
- ☐ \$15 STUDENT/LOW INCOME/MILITARY

PLEASE ACCEPT MY TAX-DEDUCTIBLE DONATION IN THE AMOUNT OF: \$ \_\_\_\_\_

MASTERCARD/VISA/AMERICAN EXPRESS ACCEPTED  
☐ MASTERCARD ☐ VISA ☐ AMERICAN EXPRESS  
CARD # \_\_\_\_\_

EXPIRATION DATE \_\_\_\_\_

SIGNATURE \_\_\_\_\_

SEND MY MEMBERSHIP MATERIALS TO:

NAME \_\_\_\_\_

CITY/STATE/ZIP \_\_\_\_\_

TELEPHONE \_\_\_\_\_

SEND TO: THE NATIONAL ORGANIZATION FOR THE REFORM OF MARIJUANA LAWS  
NORML, SUITE 640, 2001 'S' STREET NW, WASHINGTON, DC 20009. Phone (202) 483-5500

OUTTA THIS WORLD

Extraterrestrial Jewelry by HEAD-O-PONICS

unique awesome funky

solid metal

size as shown

GET THE NEW

# HAPPYCROSS™

DESIGNER PENDANT

Complete with 24 in matching chain

☆☆☆☆☆☆☆☆☆☆

Mail Order

Send personal check/money order payable to:  
**HEAD-O-PONICS INC.**  
504-542 Mount Pleasant Rd  
Toronto, Canada M4S 2M7

**\$24.95 ea.**  
+6.30 handling,  
shipping ea.

**Total 31.25 ea.**

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

No of HAPPYCROSSES ordered \_\_\_\_\_

Inquiries: Try 1-800-668-7232

Offer good U.S.A. only allow 3 weeks for delivery

## RECREATIONAL DRUGS

### RECREATIONAL DRUGS by Professor Buzz

This is the single finest book ever written on the manufacture of all kinds of recreational drugs

Profusely illustrated, it covers the equipment techniques and reagents used in the clandestine manufacture of recreational drugs. No one can be said to be informed on the subject of illegal drug manufacture unless they have read Professor Buzz's *Recreational Drugs*. Order your copy today! You will be very pleased. We know 8 1/2 x 11, 160 pp. illustrated, soft cover

**Loompanics Unlimited HT9G**  
PO Box 1197  
Port Townsend, WA 98368

Please send the above book have enclosed \$21.95 each, plus \$3.00 for shipping and handling.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

## ROCKWOOL

continued from page 44

solution at a pH of about 5.5. Errors made in the nutrient solution mix or with pH level will be magnified. Be careful to monitor both the pH and nutrient level with a watchful eye.

According to a well known Ph.D. who researches rockwool, plants grown in rockwool do not suffer water stress until the rockwool is almost dry. But he also advises to never let rockwool dry out more than 50%. It is difficult to rewet properly and roots will not grow in the dry spots.

Rockwool is somewhat forgiving. One hobby gardener reported that while away on vacation, the electricity went off at the home and the rockwool garden was left without water for eight days and nights. The Big Bud growing in the slabs were very much alive upon the growers return, but the plants had not grown much. They also suffered from mild fertilizer (salt) burn. She changed the nutrient solution and watered a double cycle to flush any fertilizer salt build up and ensure wetting of the slabs. The garden took off to grow a fine set of tops.

## ROCKWOOL IS SAFE

There are some tricks to handling rockwool. Like peat moss, dry rockwool can be abrasive and act as a skin irritant. Take extra special care if you have sensitive skin. Use gloves, goggles and a face mask or respirator when handling dry rockwool, especially in enclosed areas. Once the rockwool is thoroughly wet, it is safe and easy to work with. It creates no dust and does not irritate the skin. Keep out of the reach of children and wash clothes thoroughly after prolonged use around rockwool, as a precaution.

Rockwool mineral fibers consist of single mono-filamentous fibers bunched together. These mono-filamentous fibers are impossible to split lengthways to form even thinner fibrils. The physical characteristics of rockwool are different from asbestos. Asbestos fibers split lengthways into ultra-thin fibrils that the body has a very difficult time passing or breaking down. Rockwool fibers are much thicker and break down cross ways, to yield a short fat fiber that the body can discharge easily. ●

## INTRODUCING THE HYDROMAX 2000

HIGH TECH STATE OF THE ART  
HYDROPONIC SYSTEM

ACTUAL SIZE  
23" x 43" x 19 1/2" H



### FOOTHILL HYDROPONICS

10705 Burbank Boulevard, N. Hollywood CA 91601

Open 7 Days A Week

(818) 750-0688

#### Complete Line Of:

pH adjusted nutrients, Growlights & Accessories  
Climate Control & Test Equipment, Rockwool & Irrigation Supplies

Dealer Inquiries invited — Call or Write For A Free Catalog & Price List

— Compact system features 4 stage design.

- 1) 20 gallon nutrient solution holding tank
- 2) EBB & Flow growing bed with 10 sets of 1" deep ridges for air/nutrient flow
- 3) Plant support tray which holds 12 4x4 rockwool cubes for mature plants
- 4) Clear humidity hood for starting hundreds of clones or seedlings (hood is 9" high)

— System functions as EBB & Flow table holding a sea of plants or nursery for 12 large plants also can be adapted to slabs for drip system.

— The MAXIMIZER technique (included) features 12" air stone and air pump

— Package includes: Submersible pump w/pump outlet/drain assembly, grounded timer, water level indicator, overflow package, 1 lb Grow, 1 lb Grow-Bud, 1 lb Bud-Harvest Nutrients

**\$249.00**

## WHOLESALE LIGHT SUPPLIES

**1-800-333-LITE "Don't Pay Retail"**

#### BASIC KITS (NO REFLECTOR OR ENCLOSURE)

1000 HALIDE (MS 1000)	\$150.00
400 HALIDE (MS 400)	\$105.00
1000 HIGH PRESSURE SODIUM (LU 1000)	\$195.00
400 HIGH PRESSURE SODIUM (LU 400)	\$165.00

#### EXPANDED KITS (48" REFLECTOR AND STEEL ENCLOSURE)

1000 HALIDE (MS 1000)	\$175.00
400 HALIDE (MS 400)	\$130.00
1000 HIGH PRESSURE SODIUM (LU 1000)	\$225.00
400 HIGH PRESSURE SODIUM (LU 400)	\$190.00

C.O.D.'S SHIPPED

VISA AND MASTER CHARGE

DEALER INQUIRIES WELCOME

CALL COLLECT FOR LIGHTS

CARBON DIOXIDE SYSTEMS COMPLETE

AIR PURIFIERS ELIMINATES SKUNK ODOR (150 cfm) \$150.00

\$109.00

**BOX 3361, SPOKANE, WA 99220-3361**

Free Catalogue

HELLO. I AM THE SHROOM KING. I'D LIKE TO SHOW YOU HOW TO GROW MUSHROOMS.

SEND FOR THE BOOK **GROWING WILD MUSHROOMS**, WHICH TELLS YOU HOW TO GROW MUSHROOMS. I WILL INCLUDE SPORES FOR GROWING MY VERY FAVORITE SHROOM, THE LARGE AND MAGNIFICENT **PSILOCYBE CUBENSIS** FROM MEXICO.

OR YOU CAN GET STARTED RIGHT AWAY WITH MY **SHROOM KING PACKAGE** WHICH INCLUDES NOT ONLY THE BOOK AND SPORES, BUT ALSO MY SPECIAL MALT-AGAR MEDIUM AND SHROOM KING COMPOST.

YOU MAY PHONE IN A VISA OR MASTERCARD ORDER ON OUR 24 HOUR ORDER LINE, 206 784-9328

Send check, money-order, or credit-card number with expiration date to:  
**THE SHROOM KING**  
 Box 17444, SEATTLE, WA. 98107

NAME: \_\_\_\_\_  
 ADDRESS: \_\_\_\_\_  
 VISA OR MC #: \_\_\_\_\_  
 EXP. DATE: \_\_\_\_\_

☐ BOOK AND SPORES: \$25  
☐ SHROOM KING PACKAGE \$35  
 (book, spores, malt-agar and compost)



## The Aqua-bed™

The most revolutionary ebb-flow system available - takes your plants to their full genetic potential!

The Indoor Gardening Centers introduce **The Aqua-bed**, a revolution in the indoor gardening industry. **The Aqua-bed** is a compact all-in-one gardening system. No more bulky tables or messy reservoir systems. **The Aqua-bed** incorporates feeding tray, reservoir, pump and timer in one unit. Your plants automatically receive the right amount of nutrients, each and every cycle. **The Aqua-bed** is a state-of-the-art ebb-flow plant growth system. Let **The Aqua-bed** take your plants to their full genetic potential.

**\$189<sup>00</sup>** \*Includes pump, digital timer, pH tester, feeder tray, reservoir, rockwool, Eco "R" Grow & Bloom nutrients, hardware, instructions and growing tips.

plus shipping and handling

**The Indoor Gardening Centers, Inc.**

For Mail order  
 P.O. Box 96030, Wixom, MI 48096  
 1-800-527-GROW (4769) outside Michigan  
 VISA / MC / COD accepted

In Michigan visit our full retail showrooms  
 Canton (313) 451-0797  
 Madison Heights (313) 548-GROW (4769)  
 Waterford (313) 674-4477

The Indoor Gardening Centers offer a complete line of garden supplies: High intensity lighting, hydroponic systems, pumps, fans, timers, CO<sub>2</sub> systems, nutrients, rockwool, the growing medium of the future, and much more. Call for a free product list today!

"Our Business is Growing"

Dealer inquiries welcome



# STATE-BY-STATE COMPARISON OF THE MARIJUANA LAWS

Compiled by the National Organization for the Reform of Marijuana Laws

## Alabama

Possession: 0-2.2 lbs (For Personal Use): 0-1 yr & \$1,000  
0-2.2 lbs Not For Personal Use: 2-15 yrs & \$25,000  
2.2-2,000 lbs: 3-15 yrs & \$25,000  
Over 2,000 lbs: 15 yrs & \$200,000  
Cultivation/Sale: 0-2.2 lbs: 2-15 yrs & \$25,000  
2.2-2,000 lbs: 3-15 yrs & \$25,000  
3,000-10,000 lbs: 5-15 yrs & \$50,000  
Over 10,000 lbs: 15 yrs & \$200,000

## Arizona

Possession/Cultivation: Legal for personal use in home.  
Any amt for personal use not in home: 0-\$100  
Public Display of up to 1 ounce or possession of 4 or more ounces: 0-90 days & \$1,000  
Sale up to 1 ounce: 0-1 yr & \$1,000  
Over an ounce: 0-5 yrs & \$5,000

## Arkansas

Possession: Up to one pound: 1-5 yrs & \$750-\$50,000  
1-5 lbs: 4 yrs & \$750-\$50,000  
6 lbs: 7 yrs & \$750-\$50,000  
Cultivation/Sale: Same as possession for over 1 lb.  
Arkansas also has provisions requiring community service and drug treatment for people convicted of any pot crime. Laws regarding drug sales near schools eliminate any chance of parole until all of the sentence is served as well as imposing a minimum \$2,000 fine.

## California

Possession: Up to 1 ounce: 0-1 yr & \$1,000  
1 oz-10 lbs: 4-10 yrs & \$25,000  
10-100 lbs: 5-20 yrs & \$50,000  
Over 100 lbs: 6-30 yrs & \$100,000  
Cultivation/Sale: Up to 1 ounce: 2-10 yrs & \$10,000  
Over an ounce same as possession charge

## Colorado

Possession: Up to an ounce: 0-\$100  
Over an ounce: 0-6 mos & \$500  
Cultivation: 16 mos-3 yrs  
Sale: 2-4 years

## Connecticut

Possession: Up to an ounce in private: 30-100  
In public: 0-15 days & \$100  
1-6 oz: 0-2 yrs & \$500  
8 oz or more: 1-2 yrs  
Cultivation/Sale: Any amount: 2-4 yrs  
Second offense possession of any amount over an ounce subsequent to a prior pot offense carries a penalty of 6 mos-2 years. For 6 or more ounces, 3-5 years & \$2,000-\$500.

## Delaware

Possession: Up to 4 ozs: 1 yr & \$1000  
Over 4 ozs: 0-5 yrs & \$2000  
Cultivation/Sale: Up to 2.2 lbs: 0-7 yrs & \$1,000  
Over 2.2 lbs: 5-20 yrs  
No suspended sentences unless a person is drug dependent

## District of Columbia

Possession: Up to 50 lbs: 0-2 yrs & \$500  
50-100 lbs: 3 yrs & \$50,000  
100-5,000 lbs: 5 yrs & \$100,000  
Over 5,000 lbs: 15 yrs & \$400,000  
Cultivation/Sale: Up to 50 lbs: 0-10 yrs & \$10,000  
50-100 lbs: 3-10 yrs & \$50,000  
100-5,000 lbs: 5 yrs & \$100,000  
Over 5,000 lbs: 15 yrs & \$400,000

## Florida

Possession: Up to 20 grams: 0-1 yr & \$1000  
20 grams-100 lbs: 0-5 yrs & \$5,000  
100-2,000 lbs: 3-30 yrs & \$25,000  
2,000-10,000 lbs: 5-30 yrs & \$50,000  
Over 10,000 lbs: 15-30 yrs & \$200,000  
Cultivation/Sale: Up to 20 grams: 0-5 yrs & \$5,000  
All other amounts: Same penalties as for possession

## Georgia

Possession: Up to 1 oz: 0-1 yr & \$1000  
1 oz to 100 lbs: 1-10 yrs  
100-2000 lbs: 5-10 yrs & \$25,000  
2000-10,000: 7-10 yrs & \$50,000  
Over 10,000: 15 yrs & \$200,000  
Cultivation/Sale: Up to 100 lbs: 1-10 yrs  
All other amounts: Same penalties as for possession

## Hawaii

Possession: Up to 1 oz: 0-30 days & \$500  
1 oz to 2.2 lbs: 0-1 yr & \$1000  
Over 2.2 lbs: 0-5 yrs & \$5000  
Cultivation/Sale: Up to an ounce: 0-1 yr & \$1,000  
All other amounts: Same penalty as for possession

## Idaho

Possession: Up to 3 ozs: 0-1 yr & \$1000  
Over 3 ozs: 0-10 yrs & \$10,000  
Cultivation/Sale: Up to 3 ozs: 0-5 yrs & \$1,000  
Over 3 ozs: 0-5 yrs & \$15,000

## Illinois

Under 2.5 gms: 0-30 days & \$500  
2.5-10 gms: 0-6 mos & \$500  
10-30 gms: 0-1 yr & \$1,000  
30-500 gms: 1-3 yrs & \$10,000  
Over 500 gms: 2-5 yrs & \$10,000  
Cultivation/Sale: Under 2.5 gms: 0-6 mos & \$500  
2.5-10 gms: 0-1 yr & \$1,000  
10-30 gms: 1-3 yrs & \$10,000  
30-500 gms: 2-5 yrs & \$50,000  
Over 500 gms: 3-7 yrs & \$100,000

## Indiana

Possession: Up to 30 gms: 0-1 yr & \$1,000  
Over 30 gms but less than 10 lbs: 0-2 yrs & \$ 0,000  
Cultivation/Sale: Same penalties as for possession

## Iowa

Possession: Any amount: 0-6 mos & \$2,500  
Cultivation: Any amount: 0-5 yrs & \$2,500  
Sale: Any amount: 0-5 yrs & \$10,000

## Kansas

Possession: Any amount: 0-1 yr & \$2,500  
Cultivation: 0-1 yr & \$2,500  
Sale: 1-10 yrs & \$10,000

## Kentucky

Possession: Less than 6 ozs: 0-1 yr & \$500  
6 oz-5 lbs: 1-5 yrs & \$2,500  
5 lbs or more: 5-10 yrs & \$5,000-10,000  
Cultivation/Sale: Penalties are the same as for possession  
Note: Up to four plants is treated as simple possession

## Louisiana

Possession: Under 100 lbs: 0-6 mos & \$500  
100-2,000 lbs: 5-15 yrs & \$50,000  
2,000-10,000 lbs: 15-25 yrs & \$200,000  
Over 10,000 lbs: 25-35 yrs & \$500,000  
Cultivation/Sale: Under 100 lbs: 0-10 yrs & \$15,000  
All other penalties same as for possession

## Maine

Possession: Any amount for personal use up to 1.5 ozs:  
1.5-2 lbs: 0-1 yr & \$1,000  
2-1,000 lbs: 0-5 yrs & \$2,500  
over 1,000 lbs: 0-10 yrs & \$10,000  
Cultivation/Sale: Up to 1.5 ozs: 0-1 yr & \$1,000  
All other penalties same as for possession

## Maryland

Possession/Cultivation: Any personal use amount: 0-1 yr & \$1,000  
Any other amount, presumed intent to distribute: 3-15 yrs & \$15,000  
Importation of over 100 lbs into MD: 0-25 yrs & \$50,000  
Second Offense: Mandatory 2 yrs, up to 15 yrs & \$15,000

## Massachusetts

Possession: Any amount for personal use: Probation  
Cultivation/Sale: 0-2 yrs & \$5,000

## Michigan

Possession: Any amount: 0-1 yr & \$1,000  
Use: 0-30 days & \$100  
Cultivation/Sale: 0-4 yrs & \$5,000  
City of Ann Arbor: Possession under 1 oz: 30-100

## Minnesota

Possession: up to 1.5 ozs: 0-\$100  
Over 1.5 ozs: 0-3 yrs & \$3,000  
Cultivation/Sale: Any amount: 0-5 yrs & \$30,000

## Mississippi

Possession: Up to 1 oz not in vehicle: \$100-250  
1 gm to 1 oz in vehicle: 0-30 days & \$1,000  
1 oz-2.2 lbs: 0-2 yrs & \$3,000  
Over 2.2 lbs: 0-20 yrs & \$1 million  
Cultivation/Sale: Up to 1 oz: 0-3 yrs & \$3,000  
1 oz to 2.2 lbs: 0-20 yrs & \$3,000  
Over 2.2 lbs: 0-30 yrs & \$1 million

## Montana

Possession/Cultivation: Up to 35 gms: 0-1 yr & \$1,000  
Over 35 gms: 0-5 yrs & \$1,000  
Sale: Any amount: 5 yrs-Life  
Note: Any marijuana offense while driving punished by license suspension for 1 year

## Montenegro

Possession: Up to 60 gms: 0-6 mos & \$500  
Over 60 gms: 0-50 yrs & \$50,000  
Cultivation/Sale: 1 yr to Life & \$50,000

## Nebraska

Possession: Up to 1 oz: \$100 & drug ed  
1 oz-1 lb: 0-7 days & \$500  
Over 1 lb: 0-5 yrs & \$10,000  
Cultivation/Sale: Any amount: 0-5 yrs & \$10,000

## Nevada

Possession: Up to 1 oz by a person under 21: 0-6 yrs & \$2,000  
Up to 100 lbs by an adult: probation: 6 yrs & \$5,000  
100-2,000 lbs: 3-20 yrs & \$25,000  
2,000-10,000 lbs: 5-20 yrs & \$50,000  
Over 10,000 lbs: 15 yrs to Life & \$200,000  
Cultivation/Sale: Up to 100 lbs: 1-15 yrs & \$5,000  
All other penalties are the same as for possession

## New Hampshire

Possession: Up to 1 lb: 0-1 yr & \$1,000  
Over 1 lb: 0-7 yrs & \$2,000  
Cultivation/Sale: Any amount: 0-15 yrs & \$2,000

## New Jersey

Possession: Under 50 gms: 0-6 mos & \$750 & 2 yr loss of driver's license  
Over 50 gms: 0-5 yrs & \$15,000  
Cultivation/Sale: 0-5 yrs & \$15,000  
New Jersey also has provisions for doubling penalties if they occur within 1,000 ft of a school, and strengthened penalties for people that employ minors in the drug trade.

## New Mexico

Possession: up to 1 oz: 0-15 days & \$100  
1-8 ozs: 0-1 yr & \$1,000  
8 oz-100 lbs: 0-18 mos & \$5,000  
Over 100 lbs: 3 yrs & \$5,000  
Cultivation: Any amount: 3 yrs & \$10,000  
Sale: 1 gm-100 lbs: 18 mos & \$5,000  
over 100 lbs: 3 yrs & \$5,000

## New York

Possession: Up to 25 gms in private: 30-100  
25 gms-2 ozs: 0-3 mos & \$500  
2-4 ozs: 0-1 yr & \$1,000  
4-8 ozs: 0-4 yrs  
1-10 lbs: 0-7 yrs  
Over 10 lbs: 0-15 yrs  
Cultivation: Up to 4 ozs: 0-1 yr & \$1,000  
4-8 ozs: 0-1 yr & \$1,000  
6 ozs: 1 lb: 0-4 yrs  
1-10 lbs: 0-7 yrs  
over 10 lbs: 0-15 yrs  
Sale: Up to 25 gms: 0-1 yr & \$1,000  
25 gms-4 ozs: 0-4 yrs  
4 ozs: 1 lb: 0-7 yrs  
Over 1 lb: 0-15 yrs

## North Carolina

Possession: Up to 1 oz: 0-30 days & \$100, suspended over 1 oz: 0-2 & \$2,000  
Cultivation/Sale: Penalties same as possession of over 1 oz  
The following mandatory minimum sentences are provided for trafficking offenses:  
over 50 lbs, less than 100 lbs: 5 yr min  
over 100 lbs, less than 2,000 lbs: 10 yr min  
over 2,000 lbs, less than 10,000 lbs: 14 yr min, 20 yr max  
over 10,000 lbs: 35 yr min, 40 yr max

## North Dakota

Possession: Up to 5 oz not in vehicle: 0-30 days & \$500  
Conditional:  
5 oz-1 oz not in vehicle, or 6 oz in vehicle: 0-1 yr & \$1,000  
over 1 oz: 0-5 yrs & \$5,000  
Cultivation/Sale: Any amount: 0-10 yrs & \$10,000

## Ohio

Possession: Up to 100 gms: 30-100  
100-200 gms (0-30 days & \$250)  
200-600 gms: 6 mos-5 yrs & \$2,500  
Over 600 gms: 1-10 yrs & \$5,000  
Cultivation/Sale: Up to 200 gms: 6 mos-5 yrs & \$2,500  
200-600 gms: 1-10 yrs & \$5,000  
Over 600 gms: 2-15 yrs & \$7,500

## Oklahoma

Possession: Any amount for personal use: 0-1 yr  
Cultivation: Any amount: 2-10 yrs & \$50,000  
Sale: Less than 25 lbs: 2-10 yrs & \$20,000  
25-1,000 lbs: \$25,000-100,000  
Over 1,000 lbs: \$100,000-500,000

## Oregon

Possession: Up to 1 oz: 30-100  
over 1 oz: 0-10 yrs & \$2,500  
Cultivation/Sale: 0-20 yrs & \$100,000

## Pennsylvania

Possession: Up to 30 gms: 0-30 days & \$500  
Over 30 gms: 0-1 yr & \$5,000  
Cultivation/Sale: Any amount: 0-5 yrs & \$15,000

## Rhode Island

Possession: Less than 1 kg: 0-1 yr & \$250  
more than a kilo: 10 yr mandatory minimum  
Cultivation/Sale: Any amount: 10-30 yrs & \$50,000

## South Carolina

Possession: Up to 1 oz: 0-30 days & \$200  
Over 1 oz: 0-5 yrs & \$5,000  
Cultivation/Sale: Penalties same as possession over 1 oz

## South Dakota

Possession: Up to 1 oz: 0-30 days & \$100  
1 oz-1 lb: 0-1 yr & \$1,000  
1-10 lbs: 0-2 yrs & \$2,000  
Over 10 lbs: 0-10 yrs & \$10,000  
Cultivation/Sale: Up to 1 lb: 0-1 yr & \$1,000  
1-10 lbs: 0-2 yrs & \$2,000  
Over 10 lbs: 0-10 yrs & \$10,000  
Note: Penalty for cultivation under 1 oz same as for possession under 1 oz

## Tennessee

Possession: Up to 10 lbs: 0-1 yr & \$1,000  
Over 10 lbs: 4-10 yrs & \$10,000  
Cultivation/Sale: Up to 3 oz: 0-1 yr & \$1,000  
3 oz-10 lbs: 1-5 yrs & \$3,000  
Over 10 lbs: 4-10 yrs & \$10,000  
Note: Cultivation carries mandatory minimum 1 yr sentence

## Texas

Possession: Up to 2 ozs: 0-6 mos & \$1,000  
2-4 ozs: 0-1 yr & \$2,000  
4 ozs-5 lbs: 2-10 yrs & \$5,000  
5-50 lbs: 2-20 yrs & \$10,000  
Cultivation/Sale: Under 2 ozs: 0-1 yr & \$1,000  
Over 2 ozs: Same penalties as for possession  
Texas also has a 1-yr mandatory minimum sentence for amounts over 50 lbs and sale to minors.

## Utah

Possession: 0-6 mos & \$300  
Cultivation/Sale: 0-5 yrs & \$5,000

## Vermont

Possession: Up to 5 oz: 0-6 mos & \$500  
5-2 ozs: 0-1 yr & \$3,000  
Over 2 ozs: 0-5 yrs & \$5,000  
Cultivation/Sale: Any amount: 0-5 yrs & \$5,000

## Virginia

Possession: Up to 5 lbs: 0-30 days & \$500  
Cultivation: Up to 5 lbs: 0-30 days & \$500  
Over 5 lbs: 5-30 yrs  
Sale: up to 5 oz: 0-1 yr & \$1,000  
5 oz-5 lbs: 0-10 yrs & \$1,000  
Over 5 lbs: 5-30 yrs

## Washington

Possession: Up to 40 gms: 0-90 days & \$250  
Over 40 gms: 0-5 yrs & \$10,000  
Cultivation/Sale: Any amount: 0-5 yrs & \$10,000

## West Virginia

Possession: Up to 15 gms: conditional discharge  
Over 15 gms: 90 days-6 mos & \$1,000  
Cultivation/Sale: Any amount: 1-5 yrs & \$15,000

## Wisconsin

Possession: Any amount: 0-30 days & \$500  
Cultivation/Sale: Any amount: 0-5 yrs & \$15,000  
Madison possession: 0-6 mo

## Wyoming

Possession/Cultivation: Any amount: 0-6 mos & \$1,000  
Sale: Any amount: 0-10 yrs & \$10,000

# ASK-ED

continued from page 68

## WINTER FLOWERS

For the past few years I have grown some nice *indicas* during the summer months. I would like to expand this and grow year round.

We have only a few days of frost each year. What is the best way to protect my plants from the cold? Another question is what effect would the decreasing sunlight of winter have on my plants? Is it possible to grow outdoors this time of year, or is this just a dream?

Thanks,

- Anonymous

Salinas, CA

Marijuana is a short-day flowering plant. This means that the plant is triggered into flowering by a lengthy dark period each day. Virtually all marijuana plants trigger into flowering when they receive more than 12 hours of uninterrupted darkness each day. If a seed is germinated under this regimen, it will immediately start to flower, producing a very small bud. Older plants placed under this regimen also immediately go into flowering.

The growth and size of buds is potentiated by ample supplies of light. During the summer months the intensity of light is much greater than during the winter. This means that summer buds grow faster and larger. However, the amount of light reaching the plants on a bright winter day probably exceeds the amount they would receive from a HID (High Intensity Discharge) lamp.

The day-length also affects the size of the bud and how long it takes to mature. A plant placed into flowering in late December, when day-length is shortest, will mature quicker with smaller buds than an identical plant forced in February when the day-length is longer.

Temperature also affects plant growth. Marijuana cannot survive a freeze and is damaged by frost. Rain or high moisture encourages rot in the maturing bud. The plants can be protected from low temperatures by wrapping them in plastic at night. A small cloth, a framed plastic covering, or a cold frame can also be used.

Some growers start the plants indoors and put them outside to flower when they are 12-18 inches high. They grow no taller than 3 feet and mature in 5-8 weeks.

In the spring, after late March, day-length becomes so long that plants which have started flowering revert back to vegetative growth.

## HERBICIDE RESPONSE

I'm not sure the advice given to "Stumped" (March '89) on herbicides is entirely correct. You stated that once pre-emergents like Atrazine are de-activated the field could be planted. Atrazine is not deactivated in a week. I know this as both a pot and corn grower. Atrazine, especially during dry summers, as we experienced last year, can still damage long after application. At times it can even carry over and cause damage the following season. For this reason farmers apply Atrazine only lightly the season before they rotate to a different crop.

If one is growing in the corn or working in cooperation with the corn farmer these problems can be avoided. One method is to leave several small plots uncultivated and unplanted in the field. Those annoying low flying planes will assume that the small areas were too wet to plant or too untillable, unless you plant the weed too heavily. A dense pot patch has a distinctive color when viewed from a plane and corn doesn't provide the camouflage one would get growing under trees.

--Hopefully Helpful  
Iowa

Thanks for the correction, H.H.

## SUGAR FOR POT

When commercial growers of non-marijuana plants grow albino plants they feed the leaves with a sugar solution since they cannot make sugar themselves.

I think that this would speed up plant growth on marijuana plants too. It would give the plants extra energy for growth. What do you think?

--G.D.

Thief River Falls, MN

Cuttings which are given a small amount of sugar, about a teaspoon per quart, root faster and have less stress than controls. Growth of other plants would probably be speeded up, too.

## Books-by-Phone

we have most books, best service  
visa/mc - ups/cod - 10% off w/mo  
INDOOR MARIJ. HORTICULTURE

best indoor high tech book HORT 16.95

BEST OF SINSEMILLA TIPS

Great info, experts, photos BSTIPS 17.95

INVISIBLE HAND: Marijuana Business

Market over \$20 billion INHAND 17.95

MARIJUANA GRWRS INSIDERS GUIDE

Excellent, up-to-date MINSIDE 19.95

UNDERGROUND DRUG LIBRARY

12 bks of drug secrets UNDRUG 29.95

CANNABIS ALCHEMY

Hash, oil, isomers, labs CANAL 12.95

PSYCHEDELIC CHEMISTRY

authoritative lab manual PCHEM 14.95

ECSTASY the MDMA Story

chemistry, use, future ECSTAS 17.95

MUSHROOM CULTIVATOR

best mushroom guide MUSHC 24.95

SECRETS OF METH MANUFACTURE

Methedrine chemistry SMETH 14.95

MARIJUANA HYDROPONICS

high tech water culture MHYDRO 14.95

THE PAPER TRIP II

Create a new identity PTRIP \$19.95

COCAINE HANDBOOK

best essential reference CHBK 24.95

MARIJ CULTIVATORS HANDBOOK

Drake's revised classic MCULT 14.95

DELUXE MARIJ GROWER'S GUIDE

"the Bible", 200photos 360pp DLX 19.95

MARIJUANA BOTANY

definitive guide to mj plant MBOT 14.95

MARIJ. GROWERS Hbk by Ed Rosenthal

indoor greenhouse edition MGH 16.95

ED ROSENTHAL'S MJ GROWING TIPS

cultivation, travel, politics MTIPS 12.95

MARIJUANA QUESTION

Medical study, exhaustive MQUE 24.95

CONTROLLED SUBSTANCES ACT

Best drug reference CONSUB 34.95

PRIVACY! LOW PROFILE METHODS

Protects you, secrets, cash PRIVY 18.95

select books and add up prices SUBTOTAL\$

COD (\$5fee) or visa/mc(\$2fee) call day or night

Money Order/Discount (USA only) 10%

Shipping & handling charges

USA add \$4/order. Canada and Foreign add \$5/book

California customers add sales tax 7% of subtotal

CNC or Mo for Books plus fees TOTAL\$

Make checks payable to Books-by-Phone (personal checks held

to clear, for best service & 10% discount send Money Order).

credit card MC Visa Exp date

card #:

Name

Address

City

State

ZIP

I am over 21 (sign)

PRICES & AVAILABILITY SUBJECT TO CHANGE WITHOUT NOTICE. DRUG REFERENCE BOOKS ARE FOR SALE TO ADULTS ONLY FOR INFORMATION IN ACCORD WITH 1ST AMENDMENT. OFFER VOID WHERE PROHIBITED. NO WARRANTIES MADE. USE NOT ADVOCATED. CONSULT YOUR PHYSICIAN AND ATTORNEY.

## BOOKS BY PHONE

BOX 522 BERKELEY CA 94701



(800) 858-2665 USA

(800) 992-2665 CA

(415) 548-2124 INFO



FREE 16 page Catalog

# ASK -- ED

## NEGATIVE ION GENERATORS

Dear Ed,

To keep the odor down, what do you recommend, a negative ion generator or a charcoal filter? How do they work?

--Tired of High Prices  
New York City

Virtually all odors consist of molecules with a positive electrical charge, which are floating in the air. They are missing an electron, and this helps them float. Negative ion generators charge air molecules with extra electrons. When these charged molecules come in contact with electron deficient molecules, the electron transfers, and the particle, now neutral, or uncharged, precipitates from the air, landing on a surface. As the particles drop from the air, odors are eliminated. Negative ion generators are very effective at removing odors. They use very little power and are installed by plugging them in.

Charcoal filters chemically remove odor-causing particles from the air. Air is drawn through activated charcoal which has a high capacity to absorb the impurities from the air. They usually are equipped with either a negative ion generator or electrostatic precipitator, which electrically remove the charged particles. They are also very effective, but much more expensive than ion generators.

## THREE LEAVED REEFER

Dear Ed,

I grow 20-30 plants outdoors every year and have for about 10 years. Almost every year a few of the plants have a weird shaped stem and grow three leaves at each internode instead of two. When the plants are three feet tall the stem separates into two, each of which grow only two leaves. What causes this?

--H.B.  
Clinton, IL

This is probably a genetic variation. It is usually associated with Colombian and other equatorial *sativas*.

Because the trait is uncommon it seems that the gene involved is probably recessive, which means that the plant will not show the trait from both parents. Two plants, a male and a female, which both show the trait, if crossed, would produce only plants with this characteristic.

## CONTAMINATED POT

Dear Ed

I've heard reports that marijuana bought from street dealers are sometimes treated with angel dust (PCP), paraquat or other dangerous chemicals.

How can you recognize or test pot for such chemicals?

--A Concerned Citizen  
White Plains, NY

It is unlikely that PCP would be sprayed on marijuana to increase its potency since PCP is more expensive than marijuana. All plant parts sprayed with paraquat dessicate quickly and are unlikely to be marketed.

As with most commercial crops, the plants are most likely to be contaminated with pesticides. This applies to both domestic and imported pot. Very dangerous pesticides can be bought over the counter at nurseries and garden supply shops. Any pesticide which does not mention vegetables but only uses for ornamentals, is unregistered for crop use. Yet there is no practical way of determining whether or not they have been used on food crops. Third world countries are even worse. Pesticides not allowed to be used in the US are sold in the bazaars and stores in these countries. The pesticides are used without regulation on all crops. The poisons are sometimes used in much larger concentrations than those recommended by the manufacturer.

There are no home tests for vegetable contamination. The only way to be assured of non-contaminated pot is to have direct knowledge of the growing techniques used to grow a specific batch.

## BACTERIAL AND VIRAL DISEASE

Dear Ed,

I have been able to find very little literature on viral and bacterial diseases to which cannabis is susceptible.

I just wasted 2 1/2 months treating 60-odd plants in various mediums for deficiencies, fungus infestations, low humidity, and anything else I could think of in an outrageously successful garden.

The plants were chlorotic, necrotic, old and new leaves were yellow, bronze, maroon to black, grey. Old leaves invariably died. Growth was stunted and slow. There were no insects in the room.

I treated the plants with Captan, Maneb, and copper sulphate with no success.

The marijuana literature completely overlooks viral and bacterial ailments. I took the advice from straight agricultural literature. The plants looked like they had tobacco mosaic virus, but this organism is specific to nightshade family plants such as tobacco, tomato, and cucumber. They advised to destroy all infected plants and medium and clean thoroughly with chlorine bleach. What was it and can it be treated without destroying the plants?

Sincerely  
--The Burning Bush Ganja Company  
Manchester, NH

Viral and bacterial infections seem to be so uncommon in cultivated marijuana that most researchers have never encountered them.

## GREEN ROCKWOOL

My rockwool cubes have some sort of green growth covering them. What should I do about it?

--Chris  
Van Nuys, CA

Algae are growing on your cubes which provide a perfect environment for them: moisture, nutrients and light. The algae do use some nutrients, but the main problem is that they deplete the oxygen in the root area during the dark cycle.

To prevent algae from growing, cover the root cubes with an opaque surface: possibly mylar, aluminum foil, or white or black plastic.



# 'SHROOMS

continued from page 66

both respects can eventually be identified and used exclusively thereafter. Isolating the most vigorous strain takes time and careful observation; however, this need not interfere with continuing on to the second and third steps of the process, since any dikaryotic mycelium that has been properly isolated from other strains should exhibit fruiting ability. After several strains have been put through several fruiting stages in should be apparent which strain is most vigorous. Our observations indicate that the most vigorous fruiting strains have a distinctly "ropy" morphology when growing in the mycelial stage. This stands to reason, since this ropy appearance is due to the formation of *rhizoids*, thick strands of hyphae, which are similar in structure to the rhizoids formed prior to and during the fruiting stage. Those rhizoids function in the transport of water and nutrients to the developing mushrooms (see Chang & Hayes, 1978, Chapter 8).

If one has fresh mushroom specimens, it is possible to employ another method of isolating dikaryotic mycelium without utilizing spores. This is the method of subcutaneous isolation (Enos, 1970). The operation should be performed with clean hands and implements. A pair of latex gloves sterilized by spraying with Lysol should be worn. Hold the fresh mushrooms by the stem in one hand, and with the other hand swab the cap surface lightly with a sterile cotton swab dampened with tincture of iodine. Have ready a clean #11 scalpel and an alcohol lamp to sterilize it. Grasp the cap of the mushroom, top up, between the thumb and fingers until it splits open to reveal the interior whitish flesh. Flame the scalpel and remove a small piece of this subcutaneous flesh and transfer it to a sterilized nutrient plate. Several inoculations can be made from the interior flesh of a single cap. Since the flesh of the mushroom has been woven together out of dikaryotic mycelium, it will grow out across the plate in the same manner as mycelium isolated from a spore-germination plate. This procedure eliminates the step of having to isolate different dikaryotic strains, since mycelium isolated in this manner consists of only one strain. On the other hand, this procedure limits one to working with only one strain. ●

## BIBLIOGRAPHY

1. Books, S.M. "The Oxidation of Psilocin by p-Diphenol Oxidase (Laccase)." *Phytochemistry* 6: 529-31 (1967).
2. Bonstedt, R.G., V.E. Tyler & R. Walling. "Bluing in *Copocybe Psilocybe* and a *Stropharia* Species and the Detection of Psilocybin." *Lloydia* 30 (2): 50, 57 (1967).
3. Singer, R. "Mycological investigations on *Teonanacalli* (the Mexican Hallucinogenic Mushroom Pt. 1)." *Mycologia* 50: 239-261 (1958).
4. Scapellato, R.F., G.E. Rouse, J.R. Stein, R.J. Bandoni, W.B. Scholfield & T.M.C. Taylor. *An Evolutionary Survey of the Plant Kingdom*. Wadsworth Publishing Co., Belmont, CA, 1965.
5. Chang, S.T. & W.A. Hayes. *The Biology and Cultivation of Edible Mushrooms*. Academic Press, New York, 1978.
6. Enos, Leonard. *A Key to the North American Psilocybin Mushroom*. Youriverse Productions, 1970.

## SECRET OPERATIONS

□ **THE CONSTRUCTION AND OPERATION OF CLANDESTINE DRUG LABORATORIES**, by Jack B. Nimble, reveals how to select a location for a clandestine drug laboratory, how to cover your tracks, safety precautions, and when and how to shut down your operation to keep out of the slammer. *This book is sold for informational purposes only. 1986, 5 1/2 x 8 1/2, 60 pp, illustrated, soft cover. \$13.00 postpaid.*

## BANNED BOOKS

□ The famous **LOOMPANICS UNLIMITED** catalog! Huge 8 1/2 x 11 over 200 pages, more than 500 of the most controversial and unusual books ever printed! Crime, Police Manuals, Lock Picking, Drugs, Underground Economy, Unusual Money-Making Ideas, Hiding Out, Living Free, Self Defense, Guns and Knives, Guerrilla Warfare, Basement Nurks, Intelligence Increase, Anarchism, Heresy, Privacy Tax Avoidance, Deserted Islands, Dodging B.G. Brother, Fake ID, Revenge, Concealing & Contraband, Life Extension, Reality Creation, Murder Survival, Science, and much much more. Our catalog is **The Best Book Catalog in The World!** — You have to see it to believe it! Only \$3.00 from

Loompanics Unlimited HT93  
PO Box 1197  
Port Townsend, WA 98368

Please send the books I have marked above. I have enclosed \$

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_ Zip \_\_\_\_\_



**Killer Buds!**  
T-Shirts or Tanks  
Full Color on White 100% Cotton  
M, L, XL

VISA **\$13.75** Includes Shipping MasterCard

**Muzik Mart**  
P.O. Box 1662 • Oceanside, CA 92054  
(619) 722-3920  
Wholesale? Yeah Mon!

# HAWAIIAN DELIGHTS

- ☞ **Regular or Baby Hawaiian Woodrose Seeds:**  
A Sample Pack for \$20 or One Ounce for \$75
- ☞ **Easy Growing Betel Nut Seeds:**  
A Sample Pack for \$10 or 100 Seeds for \$80
- ☞ **Sensitive Plant Seeds:** NEW PRODUCT  
A Sample Pack for \$20 or One Ounce for \$650
- ☞ **Imported Poppy Seeds:**  
1000 Seeds for \$10 or Four Ounces for \$60
- ☞ **Kava Kava (Raw Root):**  
One Ounce for \$20 or Four Ounces for \$75
- ☞ **Kava Kava (Capsules):** NEW PRODUCT  
A Sample of 10 for \$20, 100 for \$150,  
or 1000 for \$450

☎ **CALL OR WRITE:** 

**ISLAND SPORE CO.**

**1-800-4-HOW'S-IT**

 **1-800-446-9748** 

24 HOUR ANSWERING

**P.O. BOX 8055**

**Honolulu, Hawaii 96830**



# CLASSIFIEDS

## GROWING AIDS

### CLONING MADE SIMPLE!

The most popular foolproof propagation method today. Step by step instructions, cloning kits. Write for information. Maxx Productions, 862 Southampton Rd., #135, Benicia, CA 94510

**NEW HORIZONTAL/VERTICAL** Growlights. Floor units. Custom systems. Discount Books-Supplies. **TEJAS** (214) 581-7865 (5-9pm).

**SPIDER MITE PREDATORS**—\$44/1000, Whitefly Parasites—\$30/1000, Ladybugs—\$650/1000. Postpaid, fast delivery. CODs, credit cards. Free brochure. Nature's control. PO Box 35 Medford, OR 97501 (503) 899-8318. Also available at your local grow store.

**HAWAIIAN DELIGHTS** See Our New Ad On Page 77 Island Spore Co.

**EXOTIC MUSHROOM** Spores and Books. Catalog \$2.95. PO Box 417457, Sacramento, CA 95841-7457

**'CLONING'** State of the art equipment & supplies. Call or write for free catalog. T.O.C.M. P.O. Box 4105, Austintown, Ohio 44515 (216) 793-3445.

**HARMFUL MOLDS, PLANT** pathogens bacteria, eliminated from enclosed environments. New patented device. Free Brochure. Alladin Sanitary Maintenance Systems, Box 63, Shutesbury, MA 01072

## MERCHANDISE

**A M A Z I N G** rotating device produces effects similar to hallucinating. \$5.00. VisionEX 160-D North Fairview Ave #9, Goleta, CA 93117

**FOOD SUPPLEMENTS** Superior Mannitol, Inositol, B-Blends, multivits. CALL ZEUS: 818-597-0628

**ULTRASCENT** Superscent, Incense, etc. CALL ZEUS: 818-597-0628

**RED FLY AGARIC** Mushrooms (Soma) Amanita muscaria var. muscaria. Grade A, 30g dried, \$50.00, Grade B \$50.00. Var. Flavivolvata, grade B \$40.00. Other grades and variations available. JLF, P.O. Box 184 Elizabethtown, IN 47232.

**FREE SAMPLES MOROCCAN** Incense Superdarts Superscent Le Rock Call P.D.C. (513) 851-5999.

**STIMULANTS DIET-AIDS** Decongestants Sleep-aids (Tran-dox). CoRock incense. Lowest prices. Highest quality. Guaranteed. **FREE CATALOG VIVILIFE** BOX 111-H, BALDWIN NY 11510.

**WHITE CROSS** Pink Hearts. \$7.00/1,000. 1-800-458-1613

**H E M O S T A T S** Best price anywhere \$1.49 + \$1.00 postage and handling. Dan's Distributing, P.O. Box 854, Rochester NY 14603. NYS residents add 7% sales tax

## MISCELLANEOUS

**T E R M P A P E R S** 16,278 available! 306-page catalog-rush \$2.00. Research, 11322 Idaho, #206HZ, Los Angeles, 90025. (213) 477-8225.

**ANY VIETNAM VETS** Out there with information on whereabouts of DOUG RABBIT who operated a pirate radio program in 1969 in the Saigon area? Please send info and/or tapes of the show to Ed Hassle, c/o HIGH TIMES, 211 E 43rd St. NYC 10017

**SECRET HIDING SPACES** Discover how to find and create places to hide valuables. \$2.99. 115 Airport Rd., Lebanon, OR 97355.

## PERSONALS

**TINY I MUST SPEAK WITH YOU IMMEDIATELY—PLEASE CALL NEVIL.**

**W I T C H C R A F T** Mother Nature's own high, power and serenity. Gavin and Yvonne Box 1502-H, New Bern, NC 28560

## HELP WANTED

**EASY WORK! EXCELLENT PAY!** Assemble products at home. Call (504) 641-8003 Ext. 6245

## NOVELTIES

**HUMBOLDT SEED** Purple Skunk \$1.00 each seed HC WC, P.O. Box 386, Garberville, CA 95440.

**NORTHERN CALIFORNIA** Seed Indica, Afghani, Sativa, \$1.00 each seed N.C.S. P.O. Box 114 Phillipsville, CA 95559

**EMERALD TRIANGLE SEEDS** Hawaiian and Asian \$1.00 each seed E.T.S., P.O. Box 952, Miranda CA 95553.

**M E N D O C I N O** Purple Kush Dwarf Afghani Indoor Outdoor \$1.00 each seed M.P.K., P.O. Box 1034, Redway, CA 95560.

**HUMBOLDT PURPLE** seed \$1.00 each seed. Seed, P.O. Box 611, Miranda, CA 95553

**HIDDEN VALLEY SEEDS** Super Purple Skunk \$50/25 seeds. Box Holder, P.O. Box 1057 Redway, CA 95560

**INCREDIBLE HAW—THAI** Hybrid Limited Supply \$100 15 seeds. WE. 2660 Bancroft Way, #104, Berkeley, CA 94704

**SINSEMILLA FARMS** Skunk #1—25/10 seeds. PO Dear Bob, P.O. Box 220 Meyers Flat CA 95554

## PUBLICATIONS

**UNDERGROUND BOOKS** Controversial and Unusual Catalog: \$2 P.S.S. P.O. Box 232, Fair Oaks, CA 95628-0232

## AUTOS FOR SALE

**IS IT TRUE YOU CAN BUY** Jeeps for \$44 through the U.S. Government? Get the facts today! Call 1-312-742-1142, ext. 118-A

## BEHIND BARS

**MATURE SINCERE MALE** seeking correspondence and visits with ladies on the outside who are looking for no head trips but sharing some thoughts and feelings with a sincere and handsome male. Please write: Nicholas Duran #16476 P.O. Box 607, Carson City, Nevada 89702

**EPICUREAN POET** would like to correspond with sincere ingenuous female for possible synergistic relationship. Olen Bell, C-85763 Rm 8288, C.M.C.-East, P.O. Box 8101, San Luis Obispo, CA 93409-0001

**FEMALE INMATE** Would like to hear from caring men who know how to love as well as laugh. Write to: T Hill, Churchill Co. Jail, 73 N. Main St. Fallon, NV 89406.

**FEMALE INMATE** Tall, enjoys a good party at night and serious coffee in the morning. If you are a man who enjoys the same, write to: Jackie Day, Churchill Co Jail, 73 N. Main St., Fallon, NV 89406

**I'M 33 YEARS OLD AND** have been held prisoner in this N. Carolina prison system since I was 19 years old—that's 13 long years. Now I'm wanting some high times with a sexy and loving woman and I hope to find her soon. Please write to: Jerry Lee Breeson Rt #1, Box 36, Jackson, NC 27845

**LONELY MALE,** 34 seeking a serious and meaningful relationship. Will answer any and all mail. Mr Andre Colar CMC East, P.O. Box 8101, San Luis Obispo, CA

**PRISONER 33, 6'6", 140 LBS.** brown hair, blue eyes. Very lonely. Seeks sincere honest lady, for friendship and correspondence! Age, nationality unimportant! Seeks lady in North Carolina or in any area! Send photo if can. Jimmy S. Frame 10356-94, P.O. Box 222, Tillery, NC 27887

**SHY, LONELY MALE 25** looking to open up seeks sweet female 18 to 25. Wild or tame to help bring me out, want correspondence, friendship or possible marriage. Please write: Michael Shanklin, P.O. Box 8101 #5115, San Luis Obispo, CA 93409-0003

**BLANK PHOTO ID CARDS**

Make unlimited Photo IDs on any typewriter. All materials furnished for 5 IDs.

Good in All States and Canada

5 FREE BIRTH CERTIFICATES

C.O.D. Toll-Free 24 Hrs 1-800-888-5744

CARLISLE PUBLISHING, DEPT 8823  
207 Emerson, Box 5020 • Jacksonville, FL 32207

**MARIJUANA, COCAINE, CAFFEINE, HALLUCINIGENICS, ALCOHOL, TOBACCO, & ORAL CONTRACEPTIVES** each drain certain precious **VITAMINS & MINERALS** from your **MIND & BODY**. Learn which ones, how much & to replenish them.

For a completely detailed booklet on **HEALTHY HEAD** all of these subjects **P.O. Box 146** send \$1.95 for **Glenview, IL 60025**

"Essential for your Health!!"

**BAT MAGIC**

**BAT GUANO**  
\$3.00 Per Pound  
For 8 pounds or more.

Free Catalog  
Free Growers Manual  
Free Sample  
Send \$3.00 for Shipping & Handling  
Send Cash, Check or M.O. to:  
**Bat Magic Corp.**  
Route #2  
Liberty, TN 37095

# CLASSIFIED



**NEVER BE LOCKED OUT OF YOUR AUTO AGAIN!**

**AUTO JIMMY**

Cars, Trucks, and Vans — new models and years.

Send \$12.00 + \$1 Postage & Handling for 1000 JIMMY, Suite 350, 410 Cayce Rd., Suite 300, NY 12020. Complete instructions. Allow 2-4 weeks for delivery.

## LEGALIZE



ORDER TODAY!  
HEAVY WEIGHT COTTON T-SHIRT  
\$12.00 + \$1.00 P&H  
INFINITIES  
P.O. BOX 74201  
SAN FRANCISCO, CA 94174

(IMPORTED)

**YHUBA GOLD!**

GET AS HIGH AS YOU'VE EVER BEEN!!!  
**GUARANTEED**

LOOKS, SMOKES, SMELLS  
SIMILAR TO MARIJUANA

**SATISFACTION GUARANTEED**  
ORDER NOW! Must Be Over 18  
\$20.00 per oz. to Noon Moon

6475 Pacific Coast Hwy #279 Long Beach, CA 90803

## DISCOUNT BOOKS

INDOOR MARIJ. HORTICULTURE \$15.95  
MARIJUANA GROWERS GUIDE ...\$18.95  
MARIJUANA BOTANY ...\$13.95  
MARIJUANA HYDROPONICS ...\$13.95  
MARIJ. GROWERS HANDBOOK ...\$18.95  
MARIJUANA QUESTIONS? ...\$15.95  
MARIJUANA POTENCY ...\$13.95  
PSYCHEDELIC CHEMISTRY ...\$12.95  
CLANDESTINE LABORATORIES \$10.00  
COCAINE HANDBOOK ...\$23.95  
HOW TO DISAPPEAR ...\$12.00  
THE MUSHROOM CULTIVATOR ...\$22.95  
GROWING WILD MUSHROOMS ...\$ 8.95  
MUSHROOM RESOURCE GUIDE \$12.00  
AMANITA MUSCARIA SPORES ...\$10.00  
BOOK & SPORE CATALOG ...\$ 2.00  
**FREE SHIPPING! IMMEDIATE DELIVERY!**  
FS BOOK CO., P.O. BOX 417457  
SACRAMENTO, CA 95841-7457

## COLORFUL DYES

### MAKE YOUR OWN TIE-DYES

- Complete instructions
- 70 easy to use colors
- Vibrant permanent, Procion® cold water dyes

Cal BROOKS & FLYNN for Free Catalog and Color Chart 1 (800) 822-2372 in CA 1 (800) 345-2026 or write BROOKS & FLYNN, Inc. Box 2639, Dept. HT, Rohnert Park, CA 94927 2639

**The HIGH TIMES Classified Reaches Over 2 Million People Each Month.**  
**Whether Your Message is for Business or Pleasure,**  
**put it in HIGH TIMES for Maximum Results.**

## RATES

One-time ad. \$5.00/word

### Discount for contracts:

Three consecutive ads \$4.75  
Six consecutive ads \$4.50  
Twelve consecutive ads \$4.25

## CLASSIFIED DISPLAY

\$150 per column inch

Column width is 1 5/8 inches.

### Discount for contracts:

Three consecutive ads \$140/inch  
Six consecutive ads \$130/inch  
Twelve consecutive ads \$120/inch

All display ads must be delivered camera ready

## TO ORDER

### MINIMUM AD IS TEN WORDS

Post Office Box #'s and telephone #'s count as two words each.

All ads must be typewritten.

**ALL ADVERTISING MUST BE FULLY PAID IN ADVANCE WITH CHECK OR MONEY ORDER, NO CASH.**

Ad will appear 60 to 90 days after receipt.

All ads are accepted at the discretion of the Publisher.

No advertisements for chemicals, chemical supply houses, formulas, extraction methods or synthesis reports will be accepted.

Call for Advertising Acceptability Policy (212) 972-8484

Mail to: HIGH TIMES Classified

211 E. 43rd Street, New York, NY 10017

Please include a sample of your product or catalog with your ad, and your street address and phone number.

1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39

### Cost of Ad

\_\_\_\_\_ words at \_\_\_\_\_ per word = \_\_\_\_\_ Total.

Payment must be enclosed with order  
(Check or money order only, please)

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_



# BOOKSTORE



## **THE SINSEMILLA TECHNIQUE**

*by Kayo*

Written for the curious as well as the experienced, this technique tells how fewer plants in smaller pots can yield more cannabis of higher quality. The book includes photographs and illustrations.

HTB/30 \$14.95

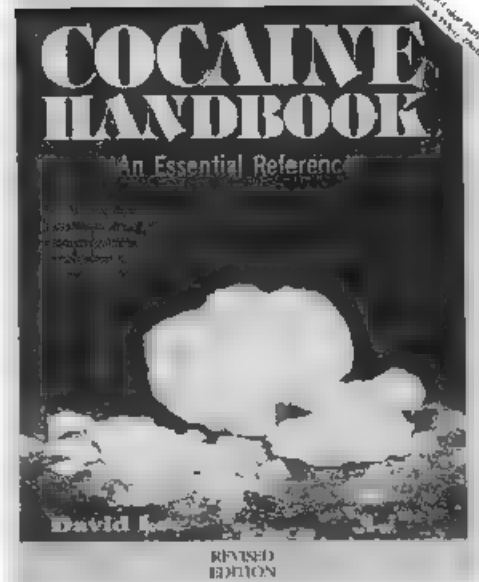


## **INDOOR MARIJUANA CULTIVATION**

*compiled by Murphy Stevens*

Simple directions and accompanying photographs make this book informative and easy to follow. Learn the best methods of growing marijuana indoors with lights.

HTB/40 \$5.95



## **HYDRO-STORY**

*by Charles E. Sherman and Hap Brenizer*

How to grow the easy way, get big yields from your backyard, patio, apartment, etc.

HTB/36 \$9.95

## **MAMA COCA**

*by Antonil*

A well-documented presentation of how wholesale dope movers and narcotics officials actively collaborate in the international drug trade.

HTB/21 \$8.95

## **COCAINE HANDBOOK**

*by David Lee*

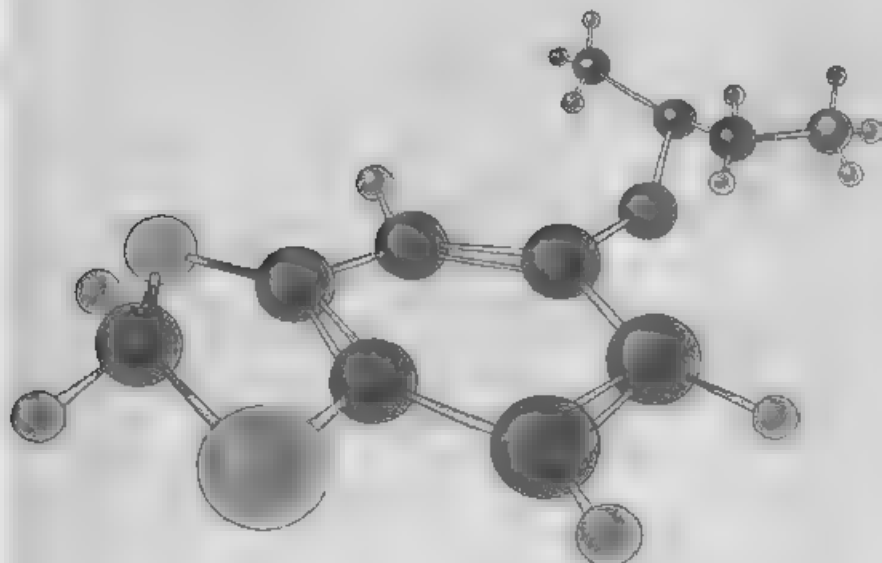
An updated edition of a classic reference written in the spirit of consumer protection. Includes sections on applicable laws, where to go for help with abuse problems, and the straight dope on health hazards, adulterants, and garbage freebase (crack). Fully illustrated.

HTB/31 \$24.95

*"A splendid summary of the drug's usage  
history, effects" -- Dr. Stanley Krippner*

# ECSTASY

## The MDMA Story



**By Bruce Elsner**

**Foreword by Dr. Stanley Krippner**

**Introduction by Peter Stafford**

**Bibliography by Dr. Alexander Shulgin**

*by Jerry Kamstra*

An underground classic back in print! The best book published on Mexico in the last 10 years! Stolen from libraries, borrowed from friends, passed from hand to hand like a valuable treasure, *Weed* is one of a kind; a poignant portrait of backroads Mexico, and the people who live in the mountains and make their living off the illegal weed! It reads like a novel, but it's all true--with a 10-page glossary and 50 full-page photographs from the collection of Roberto Ayala.

HTB/51 \$9 95

### **ECSTASY: THE MDMA STORY**

*by Bruce Elsner*

This book chronicles the history of MDMA, including the flip-flops in its legal status. The psychological effects, erotic implications, methods of use, and possible future of this substance are presented. The reader will also find an up-to-date report on potential health risks, the chemistry of MDMA, an annotated bibliography of MDMA literature, and 27 photos and illustrations.

HTB/52 \$17 95

CALL TOLL FREE  
FOR ORDERS ONLY

800-435-0715

In IL. 800-892-0753



☐ Payment enclosed

☐ MasterCard ☐ Visa

Card # \_\_\_\_\_

Expiration date \_\_\_\_\_

Signature \_\_\_\_\_

Please send me the books I  
have indicated below:

BOOK#QUANTITYXPRICE =COST

HTB/21 \_\_\_\_\_ \$ 8.95 \_\_\_\_\_

HTB/30 \_\_\_\_\_ \$14.95 \_\_\_\_\_

HTB/31 \_\_\_\_\_ \$24.95 \_\_\_\_\_

HTB/36 \_\_\_\_\_ \$ 9.95 \_\_\_\_\_

HTB/40 \_\_\_\_\_ \$ 5.95 \_\_\_\_\_

HTB/51 \_\_\_\_\_ \$ 9.95 \_\_\_\_\_

HTB/52 \_\_\_\_\_ \$17.95 \_\_\_\_\_

Subtotal \$ \_\_\_\_\_

Add \$1.75 \_\_\_\_\_

shipping for each  
book \$ \_\_\_\_\_

Grand Total \$ \_\_\_\_\_

Make check payable to HT  
Bookstore  
Mail to: HIGH TIMES Books,  
PO Box 410, Mt. Morris, IL  
61054.

Please allow 6-8 weeks for  
processing and delivery

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_

ZIP \_\_\_\_\_

1ST  
ANNIVERSARY  
SALE!

**BUSTED!!**

**DON'T LET WHAT HAPPENED  
TO ME HAPPEN TO YOU!**

1ST  
ANNIVERSARY  
SALE!

ODOR SLAYER™ was Made with You in Mind

Let ODOR SLAYER™ Protect You and Your Investment!

- Quiet
- Portable - 25 lbs
- Uses only 2 Amps.
- Continuous use
- Eliminates all odor
- Made of Stainless Steel and Rubbermaid material (will never corrode)

One year parts and labor guarantee — 30 day money back guarantee Most orders shipped in 24 hours — C.O.D. orders welcome — No deposit required — Quantity prices available — Call for information & brochure

**\$367.37 \$467.37 tax & freight included — ★ Save \$100.00 ★**

**Dragon Enterprises, Inc.**

**P.O. Box 574, Veradale, WA 99037**

**1-800-541-0446**

Made in U.S.A.

Patent Pending

Dealer Inquiries Welcome

## WHOLESALE GROW LIGHTS

All systems completely wired with 44" reflector. Highest quality lowest noise ballast with 2 year guarantee. All Halide systems come with MS Super Lamps. No misleading ads. No catches. Just the most complete, highest quality systems available anywhere for a price second to none.

### COMPLETE SYSTEMS

1000W Halide System	\$175.00
400W Halide System	\$130.00
1000W High Pressure Sodium System	\$225.00
400W High Pressure Sodium System	\$185.00
The Original World Famous Maximizer CO <sub>2</sub> System	\$189.00

### REPLACEMENT LAMPS

MS 1000W Halide	\$55.00
400W Halide	\$35.00
1000W High Pressure Sodium	\$65.00
400W High Pressure Sodium	\$45.00
wasaki Conversion Lamp 940W	\$130.00
wasaki Conversion Lamp 360W	\$60.00

For over eight years, we've carried everything for the serious indoor grower: tracks, sunrises, hydroponics, ion generators, charcoal fans, scales, etc. Please write or call for free for our catalogue.



**CALL TOLL FREE 1-800-544-7956**

**Emerald City Halide North • 8016 15th Avenue NE • Seattle, WA 98115**

**Orders Shipped Anywhere**



## #1 Bestseller

by Jorge Cervantes

Autographed by the author!

\$14.95

Add \$3 per book for postage, insurance & handling

Jorge, author of *Indoor Marijuana Horticulture*, the Bible of indoor growers, has done it again! He has taken a complex subject and made it simple. The easy-to-understand, step-by-step examples show you exactly how scores of growers use the most productive methods to grow tons of marijuana in rockwool. Jorge's new book is packed full of every last detail on Dutch Ebb and Flow cultivation, EC, pH, nutrients, reservoirs, pumps, timers, filters, temperature, cloning, and harvesting. Complete with over a hundred descriptive photos, drawings and charts, plus a growing calendar, glossary and an index.

Order both *Indoor Marijuana Horticulture* \$16.95 and *Marijuana: The Rockwool Book* \$14.95 a \$31.90 value for only \$25.00 if you act before 12-31-89!

Interport USA, Inc., P.O. Box 82009, Portland, OR 97282

**Call 24 hours 1-800-547-9755 Ext.19**

VISA MASTERCARD COD

## Marijuana: The Rockwool Book



# Ask -- ED

continued from page 76

## PLANTING METHODS, ETHYLENE and POLYPLOIDS

I have an Indian variety of my own breeding which is now in its twelfth generation. It has several unique traits, one being the first true set of leaves usually have three fingers rather than one. My observations have shown that these plants have thicker stems, closer internodes, fatter buds, sweeter taste, and are more potent than those which produce a single leaflet as their first true leaf.

An occasional plant carries the pattern even further. These plants are extremely *indica*, with the center leaflet usually being over 2 inches long.

I think that these plants are polyploid because they do not produce seed when they are pollinated with pollen from normal plants. I hope to get lucky enough to someday have a male and female polyploid at the same time.

I would like to know if any of your readers have ever observed plants whose first set of leaves had three leaflets and what their conclusions were.

When planting, I soak seeds a few hours in fish tank water, pat them dry with a paper towel, roll them around in Rootone and place the seed containers in a plastic bag with several apples. I use the fish tank water until the third leaf set appears.

Prior to turning the lights down to a 12 hours on/12 hours off cycle for flowering, I place several ripening apples around the plant, which I flower when they are small. The apples release ethylene, which affects the sexuality of the marijuana, resulting in all females. I plant ten seeds without this treatment to have at least three male pollen donors.

--Cat Buds  
North East, MD

Thanks for the tip about using apples to affect the sexual expression of the plants. The apples produce ethylene which promotes ripening and also femaleness in some plants. The products PowerBloom and Florel are made from ethylene, too. Growers have reported mixed results using ethylene. Normally marijuana plants have two sets of

continued on page 84





## The Ultimate Hippie

What did HIGH TIMES creator Tom Forcade have to do with Woodstock's success? Did Abbie Hoffman *Steal This Book* from him? How did HIGH TIMES help Jimmy Carter win the presidential election in 1976? Did Tom Forcade really try to kidnap the Sex Pistols during their tour of America? Read one of the most bizarre and fascinating life stories you'll ever see in our long-awaited biography, *The Life and HIGH TIMES of Tom Forcade*.

## PLUS

*Hemp For Victory*, a film made by the government during World War II that praises marijuana and encourages American farmers to grow pot; *Low Budget Grow Rooms*, a guide on how to do more with less; *Vitamin K*, a powerful new psychedelic drug; an account of the *Dutch Provo* movement--the forerunner to, and some say the inspiration for--the hippie movement of the '60s; *Touring the Golden Triangle*, a travelogue to Southeast Asia, where pot and poppies grow wild and free; and the *1989 Reader Survey*--a chance for you to decide who should be on the cover of this magazine as "Counterculture Hero of the Year."

## LEGEND

HAS IT!



**GRATEFUL DEAD \$15**  
6 colors with 3-D Puff Dreads



**BUDS MacSENSIE \$15**  
a six-color 'Sense' atrona design that so hot it smokes!



**BOB MARLEY LIVES! \$20**  
Six lifelike colors on hand made Rasta tie-dye with 3-D Puff Dreads

Our t-shirts are 100% heavyweight cotton for a cool feel and a cool look. Prices include shipping & handling charges.

## LEGEND

GRAPHIC APPAREL

P.O. BOX 19149  
Philadelphia, PA 19143

FOR FAST DELIVERY CALL TOLL FREE

**1-800-733-7007**



VISA & MASTERCARD

ALL DESIGN - TWOLOGANS



# THE GROWERS TEAM



**MARIJUANA GROWERS HANDBOOK** by Ed Rosenthal.  
The most factual work about indoor and greenhouse cultivation. Contains all the information and details you need to set up a high yielding garden.

• **HYDROPONICS** • **SEXING** • **LIGHTING**  
• **CLONING** • **CO2** • **CURING**

This will be the most helpful reference in your cultivation library. Complete index, and over 100 photos.

251 pages, 5 1/2" x 8 1/2",  
Spiral Bound. \$19.95



## MARIJUANA QUESTION? ASK ED

Ed Rosenthal says "This is my most helpful book because it provides information found nowhere else."

- Organized by subject for easy reference.
- A virtual encyclopedia of cannabis

305 pages, 5 1/2" x 8 1/2" Spiral Bound \$19.95

**CHARGE BY PHONE 1-800-428-7825 Ext. 102**

Marijuana Growers Handbook	\$19.95	Name	
Marijuana Questions? Ask Ed	\$19.95	Address	
<b>SPECIAL OFFER - SAVE \$2</b>			
Both Books	\$37.90		
<b>Subtotal</b>		Enclosed <input type="checkbox"/> Check <input type="checkbox"/> Money Order for \$	
CA Residents add 6 1/2% sales tax		Credit Card #	
UPS and Handling	\$4.00	Exp. Date	
US Postage add \$2 (optional)		Signature	
<b>TOTAL</b>		Mail to: Quick Trading Co, PO Box 477 San Francisco CA 94101	

## GROW BIGGER, HEALTHIER, MORE POTENT PLANTS FASTER

### ECOGROW & ECOBLOOM

#### COMPLETE PLANT NUTRIENTS

Scientifically formulated to maximize growth and quality with soil or hydroponic growing mediums. Six different formulas now available to cover all growing conditions and stages of maturity.

#### N-P-K

- 10-8-14 ECOGROW STANDARD**, for most plants and young plants under medium light and temperature  
**15-7-12 ECOGROW S**, more nitrogen for more foliage and faster growth - subtropical formula  
**20-6-12 ECOGROW M**, 20% available nitrogen for tropical plants or fast-growing plants, bright light  
**3-35-10 ECOBLOOM**, low nitrogen and high phosphorous promotes flowering, resin production and maturity when they're ready! Maximum potency and quality on mature plants!  
**14-6-17 ECOGROW R**, specially formulated for rockwool growing. Using chelated trace elements it naturally counteracts the tendency of rockwool to go alkaline. Dissolves 100%!  
**6-25-17 ECOBLOOM R**, specially formulated for rockwool bloom stage. Chelated trace dissolves 100%!

• All ECOGROW formulas contain every major and trace element needed by your plants. pH adjusted and balanced • Economical - one pound of ECOGROW or ECOBLOOM makes up to 96 gallons of high-potency plant nutrients • Easy to use, 1-2 Tsp. per gallon of water, feed normally. Can be broadcast dry around plants, watered in! • Proven! ECOGROW since 1972 - an industry standard of excellence for the discerning grower worldwide!

**ECOGROW can now be ordered factory-direct! VISA, MasterCard, UPS CDD accepted!**

16 oz. bottle of Ecogrow Std. "S" or "M"	\$5.99
16 oz. bottle of Ecobloom	\$6.99
6 oz. bottle of Ecogrow "R" or Ecobloom "R"	\$7.99
5 lb. box Ecogrow Std. "S" or "M"	\$19.95
5 lb. box Ecobloom Ecogrow "R" or Ecobloom "R"	\$24.95
10 lb. box Ecogrow Std. "S" or "M"	\$32.50
10 lb. box Ecobloom Ecogrow "R" or Ecobloom "R"	\$42.50
25 lb. box Ecogrow Std. "S" or "M"	\$69.50
25 lb. box Ecobloom Ecogrow "R" or Ecobloom "R"	\$89.50

#### Metal Halide (H.I.D.) Lighting

400 W. Halide - 40,000 lumens	\$155.00
1000 W. Halide - 125,000 lumens	\$199.95

Mention this ad when ordering lights and receive 5 lbs. of free nutrient.

53 page HYDROPONIC GUIDEBOOK & CATALOG - FREE  
 • 1989 EDITION COMPLETE & INFORMATIVE •

**DEALERSHIP INQUIRIES INVITED - USE LETTERHEAD!**

Telephone orders accepted - call ECO toll-free 1-800-426-6937  
 in WA call (206) 523-9300, 525-4784

Prices listed do not include postage & handling.  
 UPS shipping can be sent CDD

Send to **ECO ENTERPRISES**  
 Dept. E 2821 N.E. 55th St.  
 Seattle, WA 98105  
 1-800-426-6937

Please ship me

NAME

ADDRESS

CITY

STATE

ZIP

VISA or MasterCard #

Exp. Date

# ASK ED

continued from page 82

chromosomes (diploid), one set from each parent. Polyploids result because chromosomes fail to separate during reduction division when reproductive cells are formed (meiosis). As a result, reproductive cells with two chromosomes occur. Normally, each reproductive cell (pollen or ovule) has only one half of each pair of chromosomes. When the two triploid plants are crossed, the resulting plants have four sets (tetraploid).

For each gene, a triploid plant has three versions, one on each chromosome. A single version of a gene, such as is found on a single chromosome, is called an allele. Each gene affects a particular characteristic. For instance, the gene for height seems to be partially dominant. A hybrid between a short type and a tall type plant is usually intermediate between the two. The Seed Bank had a dwarf Mexican which grew only two feet tall, while its normal non-dwarf sister and brother grew to six feet. The height of the progeny was half-way between the two types.

A triploid plant with one dwarf allele and two normal ones would probably reach the size of the dwarf plant plus 2/3 of the difference between the normal plant's height and the dwarf -- about 4 2/3 feet high. Two of the alleles would produce enzymes to grow normal plants. A triploid with two dwarf alleles would be the height of the dwarf plant plus 1/3 of the height of the normal one -- about 3 1/3 feet high.

Recessive characteristics are more likely to be masked by normal chromosomes in polyploid than in diploid plants, since only one normal allele out of three is required to produce dominant characteristics. The chance of a recessive characteristic indicating is greatly reduced.

Polyploids are often more vigorous than diploid plants of the same series. The reason for this is that they have more genes, each of which acts as a factory for a specific enzyme. With more genes, more enzymes are produced, increasing the metabolic potential of the cell

continued on page 86

# MAKE HISTORY!

Be a part of a legend in the making. On Sept. 23rd, 1989, all of the parts of the Marijuana Movement will join together for the first time.

We will gather in the shadow of the Washington Monument to stand up against the assault being waged on our fundamental American rights by the Zero Tolerance Zealots.

We will gather to protest the ecological damage caused by the US Government's refusal to use hemp for fuel and paper.

We will gather to demand an end to policies which make crack cheaper than pot.

We shall continue to observe September 23rd as a national day of protest until the marijuana laws are repealed.

## SPONSORS:

The National Organization for the Reform of Marijuana Laws  
(NORML)

Help Eliminate Marijuana Prohibition (HEMP)

YIPPIE!

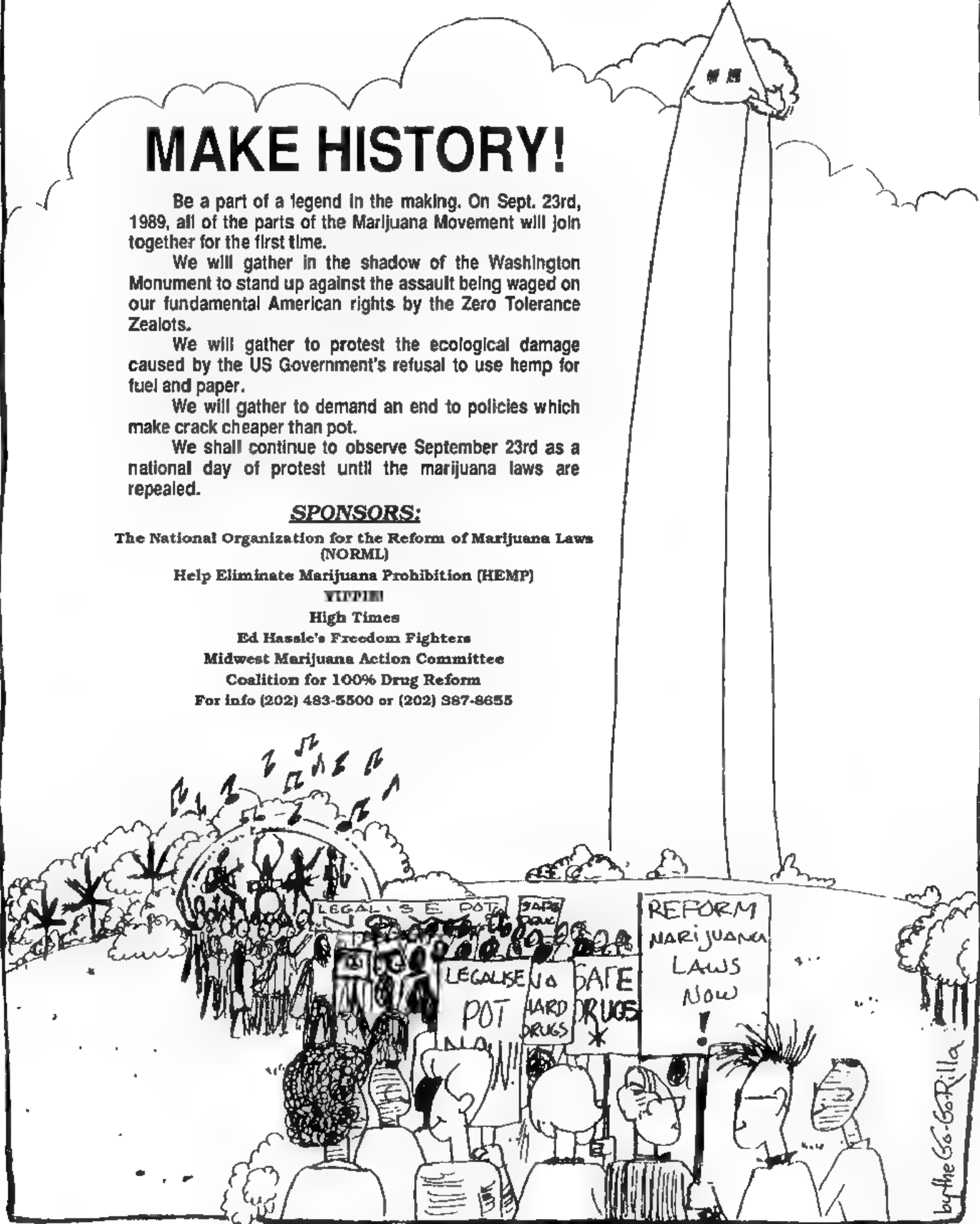
High Times

Ed Hassle's Freedom Fighters

Midwest Marijuana Action Committee

Coalition for 100% Drug Reform

For info (202) 483-5500 or (202) 367-8655





# UTGS<sup>TM</sup> URBAN-TEK GROWERS SUPPLY

INDOOR GARDENING  
EQUIPMENT & ACCESSORIES  
OPEN MON-SAT 9-6

WE STOCK FOR IMMEDIATE SHIPMENT A FULL LINE OF SYSTEMS & SUPPLIES, INCLUDING:

Metal Halides  
H.P. Sodiums  
Conversion Bulbs  
Horizontal Hoods  
Vertical Hoods  
Sun Circles<sup>TM</sup>  
Light Tracks<sup>TM</sup>  
Light Meters

Aqualerms<sup>TM</sup>  
Quads, Solos  
Rockwool  
Geolite<sup>TM</sup>  
CO<sub>2</sub> Kits  
Thermostats  
Humidistats  
Vent fans



Timers, Testers  
PH Meters  
Cloning Kits  
Seabird Guano  
Aidewat<sup>TM</sup>  
Eco<sup>TM</sup> Nutrients  
Olivias Solutions<sup>TM</sup>  
Oasis Root Cubes<sup>TM</sup>  
Zestron<sup>TM</sup> Ionizers  
Plantastic<sup>TM</sup> Products  
General Hydroponics<sup>TM</sup> Nutrients

**UTGS<sup>TM</sup>**

2911 W. WILSHIRE BLVD.  
OKLA. CITY, OK 73116

(405) 843-1888 within OK  
(800) 358-3771 TOLL FREE

**DON'T BE MISLED!**

OUR QUOTES INCLUDE SHIPPING  
Call now for the lowest prices!  
All orders shipped within 24 hours.

# ASK-ED

continued from page 84

and, ultimately, of the plant.

Your plants may be polyploids, because they are infertile with normal males. When plants have different numbers of chromosomes they are not sexually compatible. Diploid, triploid and tetraploid plants cannot reproduce with each other, only with a plant having the same number of chromosomes.

## REPELLING WORMS AND BORERS

To repel worms (actually moth caterpillars) I bought cedar chips and let them simmer in a pot of water for ten minutes. After the water cooled, I sprayed it on all the plants in my garden. It repels them all from cutworms to bud worms. The plants should be sprayed every other day.

--D S

Little Rock, AR

Thanks for the tip. Readers have also reported success using cedar blocks and chips placed around the garden. They seem to stay effective for quite a while. Other growers have reported success using mothballs, which have also been reported to repel deer.

## TASTE FOR IMPORTS

I'm an American smoker but I still take only imported weed because I'm a die-hard pure *sativa* fan.

American growers now use chemical growth aids and other crap to produce their crop so I refuse to smoke what they claim is primo bud. As far as I'm concerned *indica* strains are a joke.

I may have to pay a little more for my *sativa* buzzy material, but at least I get true organic grown, fully mature buds.

I have had excellent quality Panama Red, Jamaican Green and killer golden Thai every month since the late '70s.

The sinsemilla hype is to blame for a lot of the people not seeing any of the truly high quality marijuana that still exists in foreign countries near the equator.

--Viva Sativa  
Lakewood, OH

The idea that imports from third world countries are grown

## Mel Franks' NEW! Marijuana Grower's Insider's Guide

Mel Frank, author of the classic bible *Marijuana Grower's Guide Deluxe*, has resurfaced with an amazing new book. It's won raves from the experts. Every aspect of cultivation is covered, and new secrets are revealed in straight-talking, easy-to-understand steps. 380 pages, 200 photos. THC graphs, drawings, charts, index. Just published in December 1988!



YOU WILL BECOME A MASTER GROWER!

Greenhouses • Halides • HPS • Backyards • Mini-gardens to commercial production • Soil and Hydroponics • Increase potency • Triple yield • Eliminate Rot and Mites

Marijuana Grower's Insider's Guide

\$19.95

Marijuana Grower's Guide Deluxe

\$19.95

Regular postage and handling

add per order \$3.00

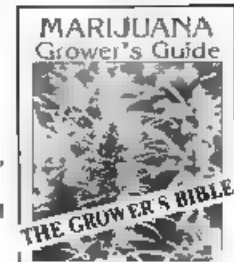
Rush order/priority mail

add additional per order \$3.00

California residents only

tax per book \$1.50

Total enclosed



Marijuana Grower's Guide Deluxe

330 pages, 150 B&W photos, 50 color photos, index, bibliography

Send order with check or money order payable to:

Red Eye Press

P.O. Box 86351

Los Angeles, CA 90086

Insist On Genuine

ॐ CULTIVATORS CHOICE ॐ  
WORLD CLASS SEEDS

The Original **SKUNK#1**



WHAT YOU SEED, IS WHAT YOU GET!!

Available through better seed dealers!

CAUTION: Cannabis cultivation is prohibited in most areas

CHECK YOUR LOCAL LAWS

organically, without the use of herbicides, pesticides or chemical fertilizers is absurd. In tropical climates virtually all of the nutrients are held by the living plants above ground. All warm climate soils have a very thin layer of topsoil. They contain much less organic matter and lack the rich nutrient value of northern soils which have a thick layer of topsoil. When the cycle of plant growth in warm soils is disturbed by clearing the ground, virtually all of the nutrients are removed. In order to grow crops, nutrients, in the form of chemical fertilizers are added or plant growth will be inadequate.

The metabolism of insects and other cold-blooded creatures increases with higher temperatures. They are more voracious and multiply faster than at lower temperatures. Rather than using the arduous methods associated with biological control, these pests are eliminated with powerful insecticides, many of which are banned in the US. Weeds are eliminated with a few sprays of herbicide.

The idea that the chemical technologies are not available to third world countries is naive. Remember Bhopal, India? The insecticide factory owned by a subsidiary of Union Carbide blew up.

In Jamaica, most of the growers use modified strip and burn techniques. The land is cleared, and the seed planted. The first year the crop uses up most of the nutrients. The rest of the topsoil is washed away with the winter rains. The second year growth is lackluster as the plants remove any residual nutrients. Third year growth, if the ground is used, is stunted. Generally, buds the first year are moderate sized and smaller each year thereafter. Some growers there use fertilizers and prolong the productivity of the land as well as producing larger buds.

*American sativa* sinsemilla is available and if it is grown well, it is much more potent than the imports. Most growers have two major problems growing *sativa*. First, many of the pure equatorial strains take a very long time to mature. Secondly they need very

bright light to fill out into lush buds. The waning light of autumn in northern areas or indoor artificial lights cause the buds to run.

In order to overcome these difficulties, growers and the seed companies have developed F1 hybrids as well as new strains which have *sativa*-like smoking characteristics but *indica*-like growth habits. Some of these strains are among the most potent and pleasant highs available on the market.

Unlike legal industries in which markets are controlled by a few companies, the marijuana industry is a true unregulated market in which the price is determined strictly by supply and demand. The price is determined by the invisible hand of the market. Generally, *Indica-sativa* hybrids and strains sell for the most money, indicating that they are in greatest demand.

## TWISTED TOPS

Some of my seedlings had twisted leaves at the top. The problem seemed solved when I transplanted. When I placed the plants in flowering it started again. The resulting buds were looser than normal. What was the matter?

--Twisted Grey Matter  
Weed, CA

The plants were suffering from a zinc deficiency.



• I welcome comments, tips, and questions regarding marijuana and marijuana cultivation. Send all letters to Ask Ed, HIGH TIMES, 211 E. 43rd St., New York, NY 10017. Also send entries for the Bud, Plant, and Garden of the Month Contests. All correspondents whose letters or photos are used will receive a free copy of my book, *Marijuana Growers Handbook, Indoor/Greenhouse Edition*.

• By submitting your photograph(s), you hereby grant permission to publisher to reprint the photograph(s) in HIGH TIMES magazine as well as any other Trans-High Corporation publications. •

ASK ED is now available by telephone 24 hours a day—365 days a year. Just dial 415-995-2-P-ZERO-T and you can get some good advice. The message is changed every two weeks, on the 1st and 16th of the month. You can also leave your questions on the ASK ED HOTLINE if you call from a push-button phone.

## Quick Trading YOUR SOURCE FOR CULTIVATING INFORMATION

**SPECIAL!**  
Buy Two Books and SAVE!

**Marijuana Growers Guide.** Frank & Rosenthal. The classic. **\$19.95**

**Marijuana Growers Handbook.** Ed Rosenthal. Most up-to-date indoor guide. Spiral Bound **\$19.95**

**Marijuana Questions? Ask Ed.** Ed Rosenthal. The Marijuana Encyclopedia. Spiral Bound. **\$19.95**

**Marijuana Growing Tips.** Ed Rosenthal. Important growing info. Spiral Bound. **\$15.95**

**Indoor Marijuana Horticulture.** Georges Cervantes. Popular indoor guide. **\$16.95**

**Marijuana Botany.** R. C. Clarke. Cultivating scientifically **\$14.95**

**Marijuana Alchemy.** D. Gold. Refining and upgrading pot **\$12.95**

**Marijuana Grower's Insider's Guide.** Mel Frank. Covers the basics. **\$19.95**

**Mega-Crop.** Simon Wright. Maximizing the Hydrofarm garden. **\$9.95**

**Indoor Sinsemilla Techniques.** Kayo. How to grow for quality and yield. **\$14.95**

**How to Grow the Finest Marijuana Indoors.** Murphy Stevens. How to use High Intensity Lamps. **\$9.95**

## SPECIAL OFFER

Order 2 books-Deduct \$2.

Order 3 books-Deduct \$4.

SUBTOTAL

CA residents add 6½% salestax

UPS and handling **\$4.00**

US Postage add \$2 (optional)

TOTAL

**CHARGE BY PHONE**  
**1-800-428-7825 Ext. 102**

Name \_\_\_\_\_

Address \_\_\_\_\_

Enclosed ☐ Check ☐ Money order for \$ \_\_\_\_\_

Credit Card # \_\_\_\_\_

Exp. Date \_\_\_\_\_

Signature \_\_\_\_\_


Mail to

Quick Trading Co.

P.O. Box 477, San Francisco, CA 94101



## High Times



**Save Your Security**



# HIGH TIMES

**CALL TOLL FREE  
FOR ORDERS ONLY**

**In HI, 800-892-0753**



Card# \_\_\_\_\_

**Expiration date** \_\_\_\_\_

**Signature** \_\_\_\_\_

CHECK BOX

<input type="checkbox"/>	ISSUE # 6
<input type="checkbox"/>	ISSUE # 13
<input type="checkbox"/>	ISSUE # 35
<input type="checkbox"/>	ISSUE # 47
<input type="checkbox"/>	ISSUE # 86
<input type="checkbox"/>	ISSUE # 92
<input type="checkbox"/>	ISSUE # 96
<input type="checkbox"/>	ISSUE # 110
<input type="checkbox"/>	ISSUE # 116
<input type="checkbox"/>	ISSUE # 130
<input type="checkbox"/>	ISSUE # 137
<input type="checkbox"/>	ISSUE # 139

PRICE	\$25.00
PRICE	\$25.00
PRICE	\$15.00
PRICE	\$ 5.00
PRICE	\$ 5.00
PRICE	\$ 5.00
PRICE	\$ 5.00
PRICE	\$ 5.00
PRICE	\$15.00
PRICE	\$ 5.00
PRICE	\$ 5.00
PRICE	\$ 5.00

TOTAL \_\_\_\_\_

## HIGH TIMES BACK ISSUES

P.O. Box 410, Mt. Morris, IL 61054

NAME \_\_\_\_\_

**ADDRESS**

CITY

STATE

ZIP



SEPT. 1989

# THE ULTIMATE **PARTY** MAGAZINE

New!  
Hooch Harris of  
Saloon Etiquette  
The Hound Since  
The Blues

Chief Ra's  
Cattfish  
Rodeo

**GOMIX!**

Harry Meadows'

**REEFER RODENT**

Gilbert Shelton's

**FAT FREDDY**

Ace Backword's

**TWISTED IMAGE**

Cannabis Cup X-tra!

Hash Cakes

by Monique

# RASTA RECIPES

by CHEF RA



It's around five o'clock in the afternoon on a hot summer day in the city. I'm walking up to the subway at Grand Central Station blasted out of my mind on some killer *Indica* bud. All of a sudden I spy a "message" TAGGED across a stoplight box that reads "Yo What's Jp CHEF RA?" Just seen that one of my fellow brothers and sisters was trying to reach out and say "Hey" made me feel good. This made me think, "Chef Ra, you got to make it out of the city, out to the river it's time for a Catfish Rodeo!" So I jumped on the train and headed out of the city.

This summer is an important cultural-political milestone marker for me because it's the twentieth anniversary of the Woodstock experience. The path to the truth has never been the same since I smoked that rather large Pink Joint on that Fateful Day in August.

I want to reach out to all the HIGH TIMES people out there and say "Hey Yo, everything's gonna be a right." But first I think we need a break from the Babylonian Bullshit scene. So come on down by the river with Chef Ra, so we can reflect on the

world we live in. It's time for the "Catfish Rodeo," so come, my Children, so we can sit in the Garden again!

I know that all of you are not into fishing but catfishin' can teach you many things. When you sit by the river bank you realize that in life, there are many paths to the truth as there are many rivers to ONE SEA! There are many different kinds of people who showed up to fish with me on this year's Catfish Rodeo. And I realized as we all sat there with different fishes in the water we still were fishin' for the same end. Food. All of us are from different colors, cultures and countries, but we're after the same thing: food for the belly and food for thought! It seems like a simple concept to grasp, but still we fight over what makes us different from one another (religion, politics, sex, race). Remember, there are many new and different ways to catch a catfish. And in this "time" we need to find new solutions to age-old problems with new ways of thinking. We need to drop those things which tend to seek divisions between us, as opposed to unity among us.

The Catfish Rodeo taught us many things this year. We banded together and there was plenty of food for all to eat. When we stopped fishing together, there was little to eat for any of us, we got hungry. Let's all keep catfishin' in the river of Life, 'cause Chef Ra doesn't want to see nobody goin' hungry in the belly or the mind. ●

## CHEF RA's Magic Good Morning Eggs Two Ways

- 3 eggs and 2 slices tomato
- 1/2 onion (green onion)
- 1/2 clove chopped fresh garlic
- 3 chopped mushrooms (you might want to try "magic")
- 1 slice cheddar cheese
- 1/2 teaspoon milk
- 1 small tight, green, sinse bud
- 1 tablespoon butter

Mix 3 eggs, tomato, onion, garlic, mushrooms (magic mushrooms give Chef Ra eggs that "mmm-good" flavor) and milk into cup and stir. Heat tablespoon of butter in separate pan or cup. Heat butter, with a nice bud grounded up in it, for about 15 minutes under low heat. Don't burn the butter. Pour the "Puna Butter" into the egg mixture. Add a slice of cheese to the egg and cook until done. What a way to start your day. The Chef Ra way!



*Preparing for fishin' in the river of life.*



*On the way to the Catfish Rodeo!*



ANTHONY VUETEN

*Monique bakes at least once a week. Hash and grass cakes are distinguished by shape and decoration.*

## ***Cannabis Cup Extra!*** **Monique's Hash Cakes**

My friend Anthony took me to Du Hazard Coffeeshop in Breda, Amsterdam, announcing, "This will be our headquarters!" Inside, I was greeted by a large, unfriendly, black dog, the shop's owner, Rene, and an employee, Monique, who appeared

to be very friendly, and offered me a piece of hash cake. Anthony and I simultaneously thought of shooting her for the Ultimate Party Magazine cover. What was the angle? Baking hash cake, of course!

Well, I gotta say--that lady could bake! The grass cakes smelled like heaven. She iced some cakes with yellow, red and green stripes, others she covered in rich chocolate and garnished with tiny confectionary mushrooms!

We were supposed to wait until the next day to photograph the cakes... Nahh, too hard! We sacrificed one on the spot!

So we took the picture (you can see it on the cover). Monique looked great. We ate more cake after the photo shoot. The rest we took with us to the 2nd Annual Awards Dinner, to everyone's delight.

While Monique wouldn't divulge any of her recipes for hash cakes, she did tell us the amounts of cannabis products she uses.



WEST COAST CONNOISSEUR JR

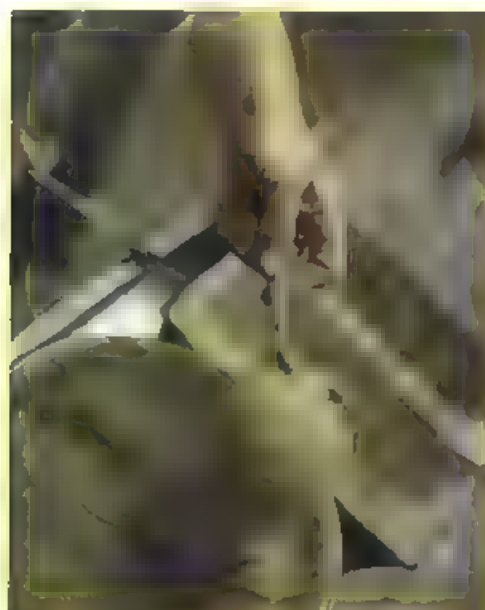
*Monique takes five.*

### **Cake mix for eight people (you can use boxed brands):**

If making grass cake for eight  
35 grams (1 oz. 7 grams)

If making hash cake for eight  
7 grams (1/4 oz.)

In Holland, pot sells for only \$1 a gram, while hash costs about \$5 a gram. In Holland, a whole cake will only set you back about \$35.00! **-FF**

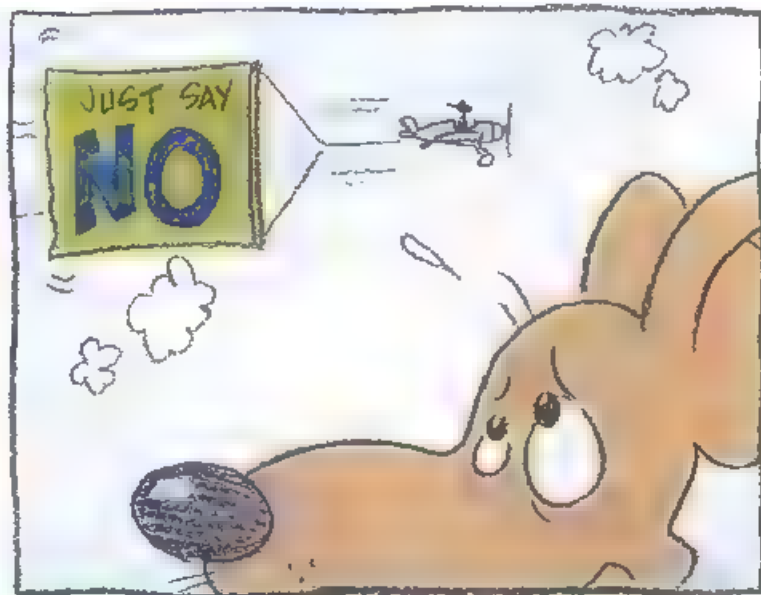
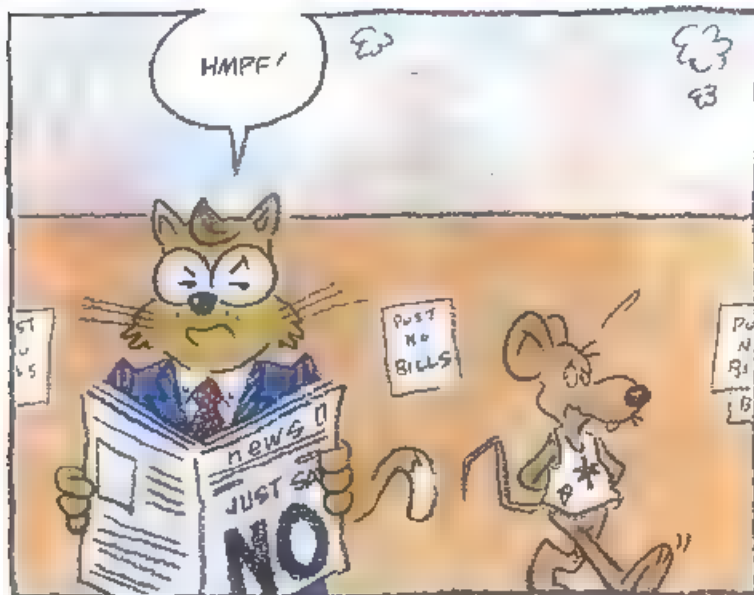


ANTHONY VUETEN

*Mixing the batter.*



# REEFER RODENT



the adventures of  
**FAT FREDDY**  
HIMSELF



**ARRRRGH! I STEPPED IN ANOTHER PILE OF DOG SHIT! THAT'S THE FIFTH TIME I'VE STEPPED IN SOME TODAY!**



**HEY, YOU! CANT YOU TEACH YOUR DOG TO SHIT IN THE STREET?**

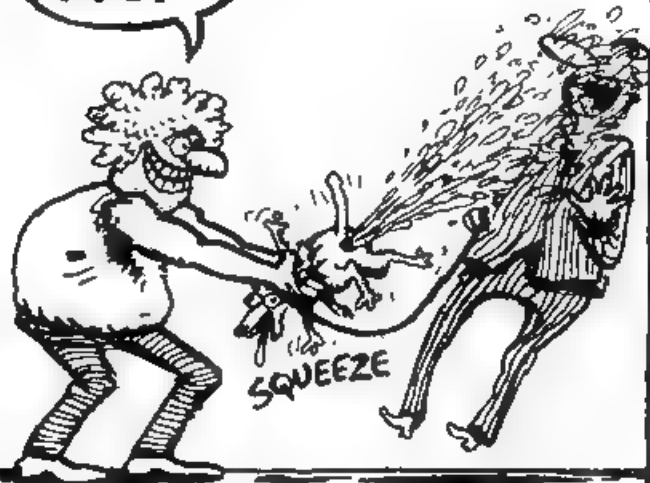
**THIS IS A FREE COUNTRY! WHAT MY DOG DOES IS NONE OF YOUR BUSINESS!**



**LOOK, IT'S REAL EASY! JUST PICK THE ANIMAL UP GENTLY, LIKE THIS...**



**AIM, AND FIRE!**



**YOU... YOU COMMUNIST! I'M GOING TO CALL THE POLICE!**

**HA HA HA HA HA!**

**ARRRRGH! STEPPED IN SHIT AGAIN!**



# HOUND'S EYE

by JAMES MARSHALL



THESE BLUES ARE GIVIN' ME THE BLUES. Sometime in the late '70s, suffering from post-punk burnout, I began writing about blues and R&B artists. At that time not too many people cared save a few hardcore geeks and collectors. There wasn't one Elmore James or Jimmy Reed LP in print and seeing guys like Johnny Shines and Lightnin' Hopkins play to empty clubs seemed like a crime. Longing for the day when people might appreciate the fact that not only did every rock guitar player get their shit from these old coots but the old coots still did it better was pretty depressing. Now that the second great white blues revival is upon us (first one was the folk/hippie GWBR of the '60s) things are still depressing but in a different way.

Everything Elmore James and Jimmy Reed ever did is now available on LP and CD, not to mention things I'd have never dreamed of--boxed sets, CDs, 45s from the UK, Germany, Japan, Holland, and the US, documenting the careers of such unheralded greats as Rabbit Brown, Long John Hunter, Washington Phillips, etc., etc. and for this I'm mighty happy. There is the Louisiana Jazz and Heritage Festival every year in New Orleans--Woodstock with American Express God Cards, where a half-million upscale folk shimmy to Boozoo Chavis and Snooks Eaglin--and the Chicago Blues Fest where a crowd the size of downtown Newark converges on Lake Michigan to hear Bo Diddley and Sunnyland Slim. I'm happy that these guys are finally getting a decent payday, and I'm pleased as piss that I can have all the records I can stand to listen to until I go broke and have to sell 'em all to a Japanese businessman to pay the rent, but the sight of Lee Atwater and his horde of yuppie followers crowding around Albert Collins gives me a dead cat feeling in my guts.

First off, there's not much good music coming out of all this. The slick, horn-heavy B.B. King-influenced bar band sound pioneered by Alligator records and Robert Cray is a far cry from what I'd call nasty blues. Just as blues artists adapted to the hippie audiences of the '60s to survive (for example, such atrocities as Muddy Waters' *Electric Mud*), competing in this market compels a bluesman to gear his attack to cajun-food-eating investment bankers. Robert Cray is the perfect Reagan/Bush era blues artist: clean cut, sterile, non-offensive to the most Republican of palates, he reminds me of Wynton Marsalis in the jazz field. He's got the looks, the talent, the ability to deal with the ins and outs of success, everything but *soul*. I know this has nothing to do with music, but did you

ever notice how small his ears are? How can he hear anything?

Nowadays, NYC where I live has about two dozen "blues" bars and I fall in periodically if there's somebody I want to see. In these dumps I can't help but notice the condescending attitude of the new yuppie blues crowd. The sight of some pasty-faced geek waving a dollar bill at Albert Collins whining "play them blooze" was enough to make me reach for my weapon, but Collins beat me to it by turning his amp up to 10 and clearing the house. The officially sanctioned racism of Republican America has put blues performers on a level somewhere around Stepin' Fetchit, at least in the rose-colored view of a large portion of the audience.

For example, check out the cover of the new LP from Little Ed & his Blues Imperials--*Chicken, Biscuits and Gravy* (Alligator). Let me first say that Ed, a disciple and nephew of the late J.B. Hutto, is one of the few popular bluesmen whose music hasn't been whitewashed or glossed up. He plays dirty, nasty, out-of-tune slide guitar with lots of grease and volume and not a hint of polish. Getting back to the cover, there's young Ed, eyes bulging, big white teeth grinning that familiar grin. Familiar from Shirley Temple movies. They

might as well have had him pose with a big slab of watermelon in his hands.

The most disgraceful example I remember in recent months was when the Letterman show went to Chicago for a week and hired some real live blues men for Paul and his lame band of hacks to jam with so they could, you know, get in touch with their roots. There sat James Cotton, last of the great harp men, former Sun records artist, former Muddy Waters sideman, and the camera would cut back to him smiling after any of Dave's self-serving attempts at humor, the camera pointing him out, as if to hang a sign over his head that said SMILING COON. If Dave Letterman and Paul Shaffer gave a fuck about James Cotton why didn't they plug his new record or let him blast through his amazing rendition of "Rocket 88"?

Listen, I'm not saying overt reverence to these guys is going to make things better. Blues oughta be fun. God knows, you're supposed to be drunk to play it (or listen to it in a bar), and I'm not saying those in a large tax bracket don't have the right to listen to whatever the hell they please.

What's called for is a bluesman with balls, great big ones. Dirty, nasty Devil's music from a part of town where they don't take American Express. A blues equivalent of the Stooges, or at least the Sex Pistols, somebody who doesn't mind pissing on a pair of top siders, turning up the amps and sending the Lee Atwaters fleeing back to their condos, ears bleeding.

Bitch, Bitch, Bitch, some folks are never happy and I guess I'm one of 'em. But I can dream can't I? ●



Robert Cray: Notice his ears.



# HOOCH HARRIS

by ELLIOTT HARRIS



*Barroom brawls are not good* **SALOON ETIQUETTE.**

Seems the gang at HIGH TIMES was looking for someone to write a column about booze. "Hot damn," I said, "it's about time you mugs did something concerning my favorite pastime." Then they said, "Good. We want you to write it!" and I said "WHHAA-AAT??"

Now, don't get me wrong. I don't drink any more or less than the next guy. And you should see how the staff at HT can toss 'em down. It's just that they go back to my bartending days, and they figured I'd know a thing or two about the subject.

I don't know how alia ya'll may cast an eye on alcohol, so I'll start where I started. Back in the late '60s, anything stronger than Bali Hai was considered bad taste. I mean most of us young v'pers hid our alcohol consumption from our FRIENDS as opposed to our parents. Our parents, considering what was going on then, breathed a sigh of relief if we came home smelling like a brewery. But greet your pals with whiskey on your breath and you might as well have your mail delivered to the leper colony.

Things eased up, as the favorite saying not too much later was, "LSD holds you up while you're getting very drunk." And, let's

face it, when you're at a house party and run out of beer, do you assign the designated driver to run out and buy another case with the money you all pitched in, or do you drink the poor host's parents' vodka?

Needless to say it was smooth sailing for Mrs. Harris' little brown boy from then on. I'm not going to bore y'all with tales of debauchery 'n' stuff. I'm supposed to be enlightening you. Besides, I'm sure some of you have more hair-raising stories to tell than I could even make up. No, my first diatribe is going to be **SALOON ETIQUETTE**.

I realize some of you don't drink in bars or just plain won't. But, sooner or later, you may find yourself in one and I don't want you to make a COMPLETE fool of yourself. Don't laugh. TOO many people do. I hang my head as I write this. I was once a Tavern Tyro myself. So here are some tips on public tipping.

**RULE #1-** Always have your money ready. Make sure when you order your drink(s) that you have ample jack in your mitts by the time the bartender comes back with your hooch. To a bartender there's nothing more exasperating than waiting on some clown to dig up his or her moola while he or

she could be further down the mahogany making more bread. This and the next rule can insure prompt service.

**RULE #2-** Tip!!! As a kid I could never understand why it took so long for the bartender to get to my end of the bar. And it seemed when he DID, he had this look on his face like I'd farted or something. It was much later, I'm sorry to say, when I myself was behind the stick, that I learned why. A bartender makes \$20 to \$30 per shift PER SHIFT! For those of you born yesterday this means PER DAY. Now you try staying stoned and paying rent and eating on thirty beans a day tops and you'll understand why T.I.P.S. means To Insure Prompt Service. If you're not planning to be a regular but think you'll spend some time in the dive, tip the poor cooie after each round. Even if you are planning to be a regular (nice juke box, nice babes, reliable connection), do the same at first 'til you and the innkeeper get to know each other. Then you can tip at the end of your shift.

**RULE #3-** Get to know the bartender's name. Do you like being called "Pal" or "Buddy" or, even worse, "YO"? Hell, no! And neither does a barkeep. When the bar's pretty packed and you've just walked in, sat down at the far end of the bar and called your pal's name, believe me, he/she heard you. Bartenders have this uncanny sense when it comes to a voice they recognize as a polite, prompt, generous patron. Don't be surprised if your bartender skips over a few rail birds to tend to you first. Then again, don't be surprised if he or she doesn't.

There are other polite, generous mugs in the world. And some of them drink in your bar.

**RULE #4-** WAIT YOUR TURN. Like I said, there are other plat num souls who may drink in your bar. So don't feel put down if the innkeeper can't make it to you immediately. You must keep in mind a bartender is much like a kindergarten teacher when it comes to dealing with the public. A bartender's public is MOSTLY DRUNK!! When one is behind the stick, one must be a psychiatrist/court jester/marshall/diplomat at the drop of a glass. A lot of times, he or she can't just run up to you and wait on you like you were the only one in the joint. So wait your turn. He or she knows you're there. And be nice when they get there.

Other than these few tips, I can't think of much else, except the golden rules of fighting, spitting (I mean, RHEE-ly) and maybe wenching. Don't get me wrong--back in the old days when folks drank warm beer (more on this in a future column), wenching just came with the program, y'know??? But, this is the '80s. Jim.

I do want to mention one other thing. Something maybe your folks taught you long ago: PLEASE and THANK YOU work wonders with a bartender. You don't have to be a sissy about it. No matter how you say it, it never fails to pop a bartender's eyes.

Now that we got that out of the way, next month, we'll get down to BASICS. ●

VIPER MARIJUANA SMOKER

# ULTIMATE PARTY

by BUFORD BOSKO



A lot of great letters and cards have been delivered to the NORMLTHON, but one in particular really blew us away. A box of "fireworks" arrived in an overnight package. When I opened up the box, there were three huge, thick wads of dollar bills inside, along with several photographs, hundreds of Top 100 ballots, and a letter from Dennis and Dave, organizers of the NORML METALLICA SKUNK RAFFLE..

Dear Ed,

You and the staff and NORMLTHON organ zers are doing one hell of a job, thanx! My roommate and I decided to give you a hand. We donated one half-ounce, a quarter-ounce, an eight-of-an-ounce, and one gram of resin heaven hash as first, second, third and fourth place prizes in a raffle for NORML. We were motivated by the May '89 issue, which stated the University of Minnesota held a NORML party and raised \$100.00. We knew that would be a cinch to pull off!

Well, the total is in. Altogether \$300.00 was raised! I just wanted to thank "Mickey the Rat" for helping with the prizes.

The message should come across pretty clear. All of our friends and customers really appreciate smoking herb legally and it should be that way across the USA.

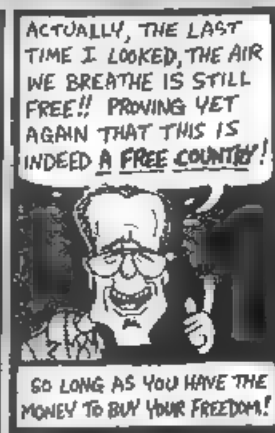
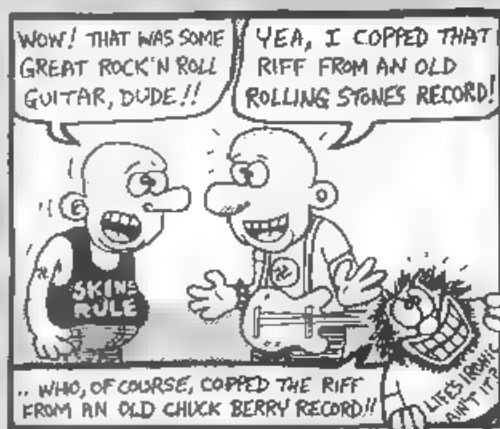
Thanx

From the great state of intoxication, Alaska.  
Dave Pope

Dave's given us an idea! How would you like your next big party or fundraiser to be "The Ultimate Party"? Just send the details of your bash or blast to us, and if it looks and sounds like a good time, we'll make it our "Party of the Month"! Send any photos (with written permission from anyone in the photo to publish their picture!) and a description of all the fun that went down to: **THE ULTIMATE PARTY, c/o HIGH TIMES, 211 East 43rd St., New York, NY 10017.** (All entries will become the property of HIGH TIMES magazine, so don't expect to get the photos back--sorry!)

## TWISTED IMAGE

by Ace Backwords ©1989



## IT'S THE EXTRA-LARGE HIGH TIMES TOP 100!!!

- |   |  |  |  |  |
|---|--|--|--|--|
| 1. DAVE + DENNIS'S<br>NORML METALLICA<br>SKUNK RAFFLE | 21. WAKE<br>BAKE   | 41. ROBERT A<br>H. PLEIN   | 61. HERBIE<br>WON KENORI   | 81. Ahhhmmmmmaaaaaa!...!!?   |
| 2. PINK FLOYD   | 22. SAVE THE BUS!  | 42. POT + SILLY PUTTY = FUN  | 62. ISLAMIC ART  | 82. TRACT JONES GEORGE   |
| 3. BONG HITS  | 23. NO TAXATION<br>WITHOUT<br>LEGALIZATION                       | 43. ANN ARBOR'S<br>H.A. H. BASH '84                                  | 63. KISSING A TH<br>MIRROR SHADES ON   | 83. DELTA<br>DRAGON  |
| 4. METALLICA  | 24. DOSE<br>BUSH   | 44. EQUAL<br>RIGHTS  | 64. CALVIN<br>+ HOBBS  | 84. SMOKE A ROACH,<br>DON'T DRIVE ONE  |
| 5. NORML  | 25.  | 45. FELIX<br>THE CAT   | 65. BOYCOTT<br>EXXON   | 85. HIPPIY CHICK<br>ON "WONDER YEARS"  |
| 6. QUASI MODO   | 26. GROW<br>YOUR OWN   | 46. I SUPPORT<br>CHINA'S<br>REVOLUTIONARIES                          | 66. SMOKING MASSIVE<br>BONG HITS AFTER BEING<br>STRAIGHT FOR NINE MONTHS<br>DUE TO PREGNANCY | 86. SHELL B +<br>SWAMPERS<br>H. FART + ANIMALS                                       |
| 7. THE<br>GRATEFUL<br>DEAD                            | 27. SHROOMS  | 47. HOWARD<br>STERN  | 67. I ♥ EVERYONE   | 87. 4x4<br>TRUCKS  |
| 8. ALASKA   | 28. B.G. GREEN, ST CKY<br>BUDS                                   | 48.  | 68. PEACE, POT, + MICRODOT   | 88. PATHETIC<br>\$275,000.00 - 50,000.00 V2 F<br>NORML'S BUDGET SMOCKERS PER SMOCKER |
| 9. LEGALIZE IT!                                       | 29. BOYCOTT<br>COCAINE!  | 49. BURN<br>BUSH'S<br>EH'ND  | 69.  | 89. METAL MUSIC  |
| 10. DUNGEON   | 30. LED<br>ZEPPELIN  | 50. TERRENCE<br>McKENNA<br>-KEEP UP THE GOOD WORK!                   | 70. EDIE BRICKE<br>+ NEW BOHEMIAN  | 90. I WANT<br>ROBBIN   |
| 11. SLAYER  | 31. Anchorage  | 51. THE<br>VIOLENT<br>FEMMES   | 71.  | 91. Jack Daniels   |
| 12. ULTIMATE<br>PARTY HOUSE                           | 32. 1 FREEDOM<br>2 ANARCHY<br>3 BUDS FROM A2<br>(A2 = ANN ARBOR) | 52. SACA<br>LA MOTA  | 72. BUNNY WAILER'S<br>LIBERATION TOUR '89  | 92. I ♥ DENNIS   |
| 13. SEX   | 33. ASK ED   | 53. BARBARA BUSH.<br>KADAFI WITH A BAD<br>BLEACH JOB                 | 73. LARD   | 93. I ♥ DAVE   |
| 14. JIMI HENDRIX                                      | 34. IF I'M NOT<br>WASTED THE<br>DAY IS...                        | 54. DOSE<br>YOUR BOSS  | 74. SKYDIVING, CYCLING,<br>GUITAR-PLAYING, BLOWN-OUT<br>INDIVIDUAL I LOVE ME!                | 94. ENTER THE REALM<br>OF STACEY + ERICA'S<br>MINDLESS TRIPS OF THE BRAIN            |
| 15. KELLY BUNDY                                       | 35. JUSTICE  | 55. SKUNK BUD<br>ICE BONG HITS<br>(KNOW WHERE I CAN GET A NEW LUNG?) | 75. WHO KILLED<br>ABBIE?   | 95. THE BAI  |
| 16.   | 36. M. N. + I<br>COMPUTERS                                       | 56. FUCK HATE<br>MAKE LOVE TO A FASCIST                              | 76. THE BUSH LEAGUE  | 96. 16 YEAR-OLD<br>SLUTS   |
| 17. AC/DC   | 37. PUNK RASTA<br>LOWRIDERS<br>FROM HELL                         | 57. THE<br>ACLU  | 77. THE '60s COMING TO<br>CHINA, RUSSIA, S. KOREA,<br>JAPAN + BACK TO U.S.                   | 97. OODA-BOODA<br>BABY   |
| 18. FRODO BAGGINS                                     | 38. E. MCREE<br>LADIES   | 58. SATURDAY MORNING<br>SEX, DOPE, COFFEE<br>+ CARTOONS              | 78. MC5  | 98. planting potseeds<br>by the Police Station!                                      |
| 19. FRANK<br>ZAPPA                                    | 39. PEACE  | 59. SPOOPY!<br>(SOUNDS KINKY, DOESN'T IT?)                           | 79.  | 99. LOVE<br>N. THEM FARTH  |
| 20. LSD   | 40. BUDS THAT WEIGH<br>5 LBS.                                    | 60. Rude Dog   | 80. FLOYDATHON<br>(LISTENING TO PINK FLOYD<br>ALBUMS IN BLACKLIGHT ROOM)                     | 100. GROWING ENOUGH<br>WEED SO I CAN<br>SUPPORT NORML                                |

NORMLTHON TOTAL: \$7000.00

THE TOP 40 NORMLTHON VOTES WILL  
APPEAR IN THE DECEMBER ISSUE!SPECIAL INVITATION: WHY NOT PUT  
YOUR TOP THREE THINGS IN LIFE ON  
THIS BALLOT, AND MAIL IT TO US?THE HIGH TIMES TOP 100  
211 EAST 43RD STREET  
NEW YORK, NY 10017

#1

#2

#3



# DANSCO INDOOR GARDEN CENTERS

One stop shopping

## LIGHTING SYSTEMS

(All systems are completely wired with quiet, ventilated ballast enclosure and quick-disconnect lamp lead)  
2 year ballast warranty and 1 year lamp warranty

1000W Metal Halide.....	189.00
(Superbulb)	
400W Metal Halide.....	139.00
(Superbulb)	
Metal Halide Phosphor	
Coated Bulbs.....add 5.00	
175W Metal Halide.....	110.00
1000W High Pressure Sodium.....	259.00
400W High Pressure Sodium.....	189.00
150W High Pressure Sodium.....	110.00
Horizontal or Parabolic Reflectors	
available for all systems	

## BULBS

1 year lamp warranty

### METAL HALIDE:

MS1000, 125,000 lumens.....	55.00
MH1000U, 110,000 lumens.....	62.50
MS400, 40,000 lumens.....	44.00
MS400, Hor., 40,000 lumens,	
horizontal.....	54.00

### Metal Halide Phosphor

Coated Bulbs.....add 5.00

M175, 15,000 lumens.....	29.00
--------------------------	-------

### HIGH PRESSURE SODIUM:

LU1000, 140,000 lumens.....	69.00
LU400, 50,000 lumens.....	45.00
LU150, 16,000 lumens.....	32.00

### HIGH PRESSURE SODIUM

#### CONVERSION:

940W, 134,000 lumens.....	149.00
360W, 40,000 lumens.....	69.00

### FLUORESCENT TUBES:

24" Gro Lux.....	7.95
24" Vita Lite.....	12.50
48" Gro Lux.....	9.95
48" Vita Lite, Power Twist.....	13.95

## REFLECTORS

(Polar white finish on all, sockets included)

22" Round.....	24.95
44" Conical.....	39.95
48" Parabolic.....	54.95
84" Parabolic.....	169.95
Horizontal 400W.....	49.95
Horizontal 1000W.....	54.95

## LIGHT MOVERS

4' Light Track.....	99.00
6' Light Track.....	99.00
1LS Sun Circle.....	139.00
2LS Sun Circle.....	199.00
3LS Sun Circle.....	259.00

## HYDROPONICS

HYDRO-FLO I.....	265.00
Incl: 6 trays, 36 one gallon pots,	
reservoir, pump, timer, filter, irri-	
gation, rockwool, nutrients & pH control	
Expansion Module.....	16.00



### EBB-FLOW SYSTEM.....\$220.00

Incl: 2 - 44" x 24" grow trays, 25 gallon reservoir with lid, pump, timer & irrigation

### EBB FLOW MODULE.....\$34.95

Incl: 1 - 44" x 24" grow tray & irrigation plumbing

### HYDRO CELL II.....\$250.00

Incl: 12 two gallon cells, reservoir pump, timer, filter, irrigation, rockwool, nutrients & pH control

### Expansion Cell.....\$6.00

White Lightning NFT Tubes, 6' & 8' Lengths.....\$68.95

## TEST EQUIPMENT

Digital pH Pen.....	64.95
Digital Dissolved Salts Pen.....	64.95
Combination pH & Dissolved Salts Meter.....	399.00
Professional Digital Light Meter.....	175.00
CO <sub>2</sub> Tester.....	8.95
CO <sub>2</sub> Analyzer Tube.....	4.50
MIN-MAX Thermometer.....	12.95
Temperature/Humidity Gauge.....	12.95
30x Light Scope.....	26.95
Whatman 4.5-10 pH Test Strips.....	8.95

## CO<sub>2</sub> SYSTEMS

Injection System with exhaust control without tank.....	179.95
CO <sub>2</sub> Regulator/Flow Meter.....	79.95
DANSCO Propane Burner/CO <sub>2</sub> Generator.....	299.00

## ODOR CONTROL

Zestron 700 Ionizer.....	79.95
Zestron 1000 Ionizer.....	79.95
Zestron Collector Ionizer.....	110.00
Zestron 3600 Ionizer.....	359.00
DANSCO Charcoal Air Filter.....	79.95
Ozone Generator for total odor removal.....	839.00

## TIMERS

15A 120V, 24hr, Heavy Duty.....	19.95
15A 240V, 24hr, Heavy Duty.....	24.95
40A 120V, 24hr, Industrial.....	33.95
40A 240V, 24hr, Industrial.....	38.95
40A 120V, 1-60 minute cycle.....	67.95
15A 120V, 4 ON - 4 OFF, 1 minute minimum.....	26.95



### PROFESSIONAL PROPAGATION SYSTEM.....\$169.00

Includes: 1 - 44" x 24" x 11" propagation dome, 2 pro heat mats, thermostat with remote probe & 1 qt cloning solution

## FANS & BLOWERS

100 CFM Axial Fan.....	25.95
240 CFM Axial Fan.....	57.95
560 CFM Axial Fan.....	68.95
265 CFM, Squirrel Cage.....	56.95
465 CFM, Squirrel Cage.....	64.95
745 CFM, Squirrel Cage.....	136.95
980 CFM, Squirrel Cage.....	134.95
12" Oscillating Table Fan.....	33.95
16" Oscillating Table Fan.....	48.95
12" Wall Mount Fan.....	52.95
16" Wall Mount Fan.....	59.95

## THERMOSTATS & HUMIDISTATS

Thermostat, heating or cooling.....	19.95
Thermostat, heating or cooling with remote probe.....	34.95
Humidistat 40 - 90%.....	47.95
Combo Thermostat-Humidistat Fan Controller completely wired with 2 outlets.....	109.95

## SUBMERSIBLE PUMPS

170 GPH.....	36.95
205 GPH w/ float control.....	59.95
240 GPH.....	47.95
310 GPH.....	49.95
1250 GPH.....	67.95

## PROPAGATION AIDS

24" x 44" x 11" Propagation Dome.....	55.00
48" x 11" Pro-Heat Tape.....	21.95
Thermostat with Remote Probe ± 1".....	49.95
Woods Rooting Compound.....	7.95
Rootone F, 2oz.....	4.49
Olivia's Cloning Solution, 1 qt.....	11.95
Olivia's Cloning Solution, 1 gal.....	39.95

## ROCKWOOL

1 1/4 x 1 1/4 Multi-Blocks sheet.....	5.00
2 x 2 Multi-Blocks sheet.....	6.86
3 x 3 Cube.....	34
4 x 4 Cube.....	48
6" x 3' Slab.....	4.75
8" x 3' Slab.....	6.25
12" x 3' Slab.....	9.50
45lb Repellent Bale.....	39.95
35lb Absorbent Bale.....	22.00
55lb Absorbent Bale.....	56.95

## ROCKWOOL (continued)

Full case discount of 10% on Rockwool products

## NUTRIENTS

### SOIL: GROW FOODS

Peters 20-20-20, 2 lbs.....	5.00
Plant Marvel 17-17-17, 2 lbs.....	5.00
Eco Grow 10-8-14, 1 lb.....	5.95

### BLOOM FOODS

Peters 10-30-20, 2 lbs.....	5.90
Plant Marvel 10-52-17, 2 lbs.....	7.50
Peters 5-50-17, 2 lbs.....	8.00
Plant Marvel 5-40-17, 2 lbs.....	7.50
Eco Bloom 3-35-10, 1 lb.....	8.95

### HYDROPONICS:

Eco Grow R 14-6-17, 2 lbs.....	11.95
General Hydroponics A	
14-2-16, 2 lbs.....	12.95
Hydrolite 9-7-14, 1 lb.....	6.95
Wondergrow 4-1-5, 1 qt.....	4.95
General Hydroponics	
Micronutrient, 1 qt.....	7.95
Eco Bloom R 6-25-17, 2 lbs.....	11.95
General Hydroponics B	
2-15-18, 2 lbs.....	12.95

## REFLECTANTS

4' x 25' Mylar.....	17.95
4' x 50' Mylar.....	27.95
4' x 100' Mylar.....	44.95
20' x 100' White Visqueen.....	59.95

## ACCESSORIES

Pesticide Respirator.....	22.95
P.V.C. Disposable Spray Suit.....	7.09
U.V. Protective Goggles.....	5.95
BT 320 Thinning Scissors.....	8.49
DX 320 Stainless Thinning Scissors.....	14.79
340 HT Stainless Scissors.....	21.95
Wisclips.....	7.95
2 Liter Dramm Plastic Watering Can.....	9.95
5 Liter Dramm Plastic Watering Can.....	27.95
Gardena Waterwand.....	19.95
Superthrive, Plant Elixir, 1 oz.....	1.98
Taylor Min/Max Thermometer.....	22.95
75W Submersible Water Heater.....	14.26
Floating Thermometer with Suction.....	1.45
1" Dial Pocket Thermometer.....	8.95
OHAUS Triple Beam Balance.....	108.95
pH Up, 1 qt.....	5.95
pH Down, 1 qt.....	5.95

## BOOKS

Complete Book of Plant Propagation.....	14.95
Plants Plus, A Guide To Plant Propagation.....	14.95
Gardening Indoors.....	7.95
ABC of NFT.....	34.95
Beginning Hydroponics.....	7.95
Hydroponic Food Production.....	29.95
Hydroponics For Everyone.....	17.95
Rockwool in Horticulture.....	34.95

Established 1978. Most orders shipped within 24 hours.  
VISA, MC, Amex (Seattle only). COD orders welcome.  
Free 18" x 24" Erasable Planning Calendar with pen for every order over \$25.00.

Prices Subject To Change Without Notice.

### DANSCO INDOOR GARDEN SUPPLY

315 North 105th  
Seattle, WA 98133  
(206) 784-9492

orders only: (800) 345-3398

### DANSCO INDOOR GARDEN CENTER

844 University Avenue  
Berkeley, CA 94710  
(415) 549-2918

orders only: (800) 523-1357

Dealer Inquiries: DANSCO DISTRIBUTORS 4442-27th W.  
Seattle, WA 98199 (206) 282-7282



STATE OF THE ART IN BIOTECHNOLOGY

# PHOTOTRON<sup>®</sup>

OVER 80,000 SOLD WORLDWIDE



Hello, my name is Jeffery DeMarco, President and Founder of Pyraponic Industries Inc. II. My master's thesis concerned the cannabinoid profile of marijuana. The knowledge gained through this research and experimentation can now be applied to the growing of any herbaceous plant from mint and basil, to roses and tobacco.

In pursuit of this master's thesis, I first had to generate the most extensive, nonacademic library on the subject. Second, I assembled the most extensive, scientific bibliography ever created. Then, I went into the laboratory at a major university while under federal license, and designed the most sophisticated laboratory grade growing chamber in the world called the PHOTOTRON<sup>™</sup> and the methodology "Growing Plants Pyraponimetrically."<sup>®</sup>

The Phototron<sup>™</sup> is not presented to the public as a piece of paraphernalia intended for the unlawful production of marijuana. The system was designed to grow any plant. The private cultivation of marijuana has been illegal under numerous state and federal laws since 1936. Marijuana can only be grown legally with a federal license. I worked under such a license at the time I was engaged in my research. Pyraponic Industries Inc. II will never knowingly sell products to anyone expressing the intent to produce illicit substances. If you were to research indoor plant growing techniques, as I did, a similarity soon becomes apparent. Every system before the Phototron<sup>™</sup> has attempted to duplicate a tropical climate, such as Hawaii's, in a confined area. I suggest that when you finally achieve the re-creation of Hawaii, you can do no better than Hawaii's results.

In fact you will grow the plant six to nine months, with an average six (6) inch internodal length (the distance between fruiting sites). That will produce a fruiting ratio at the tops of the plant equal to only ten percent (10%). Ninety percent (90%) of the plant material is unusable, and the plants are killed off after harvest in preparation for planting the next crop.

Number one, the only thing I am waiting nine months for is a baby. Number two, I don't want a tree in my home. Number three, I am not going to pay the electric bill to artificially reproduce the sun. That is why I made my system so revolutionary. The Phototron<sup>™</sup> measures only 36 inches tall by 18 inches wide. Its potential is deceptively masked by the simplicity of functional design and compact size.

On average, the Phototron<sup>™</sup> draws only \$4.00 per month in electricity. I guarantee you will grow six (6) plants, three (3) feet tall in forty-five days, while maintaining a one (1) inch internodal length. I guarantee that in your Phototron<sup>™</sup> each of your six plants will produce over one thousand fruiting sites from top to bottom. Mine is the only system in the world which will allow you to reflower and refruit the same plants every forty-five days. You will remove from the system everyday. Beginning on DAY 20 after seed germination, an average of six to eight ounces of plant material, such as tobacco, can be harvested every forty-five days.

Please, do not allow the technical sounding nature of the Phototron<sup>™</sup> to scare you away. I personally service back and guarantee each unit sold. The instructions are clear and simple; the system comes to you complete. All you must do is select your seeds, plug in the system and water it routinely. Then, if you have any questions, you may call me directly. Ask your question. Get your answer.

You can not fall with my Phototron<sup>™</sup>. I do not allow any of my Phototrons<sup>™</sup> to fall below showcase. I personally have guaranteed every Phototron<sup>™</sup> ever sold, and I have never had one returned, ever, and I'm not starting now.

Call me at 1-619-451-BUDS. If you do not learn more about plant production than you have ever learned before, I will pay you for the call. Can you afford not to call?

Jeffery Julian DeMarco.



PHOTOTRON		MONS	13	YES	YES	YES	YES	YES	YES
HALIDE SYSTEMS		NO	NO	NO	NO	NO	NO	NO	NO
LIGHT	LEAF SHADING	YES							
	LINEAR FEET OF LIGHT	YES							
NUTRIENTS	SPECTRUM ADJUSTABILITY	YES							
	COMPUTER DESIGNED FOR EACH SYSTEM	YES							
	COMPUTER TRACE BOX	YES							
	WATER KILLS THE PLANTS	YES							
	WATER KILLS THE PLANTS	YES							
	ONE HIGH INTERNODAL LENGTH	YES							
	ONE HIGH INTERNODAL LENGTH	YES							
	ONE HIGH INTERNODAL LENGTH	YES							
	ONE HIGH INTERNODAL LENGTH	YES							
	ONE HIGH INTERNODAL LENGTH	YES							
CO.	PYRAPONIC INDUSTRIES, INC. II								
SERVICE	PYRAPONIC INDUSTRIES, INC. II								

1-619-451-BUDS

WE ACCEPT VISA, MASTERCARD, DISCOVER AND MONEY ORDERS



# Give your plants a "dutch treat"!



The SGS Europonic System. The most advanced concept in growing technology, designed and tested in Holland.

## WE ARE DEDICATED TO THE INDOOR GARDENER. SGS IS YOUR CONNECTION WITH STATE OF THE ART DUTCH GROWING TECHNOLOGY.

• 400 W AND 1000 W METAL HALIDE AND HIGH PRESSURE SODIUM LAMPS • VERTICAL AND HORIZONTAL REFLECTORS • CONVERSION BULBS • SGS EUROPONIC ROCKWOOL SYSTEM • THE GASSER CO2 SYSTEM • CO2 GENERATORS • ALUMINUM CO2 CYLINDERS • SUN CIRCLE, SOLAR SHUTTLE AND WHIRLIGIG LIGHT MOVERS • ZESTRON NEGATIVE ION GENERATORS • KLONE KITS • GRODAN ROCKWOOL CUBES, BLOCKS AND SLABS • A COMPLETE LINE OF HYDROPONIC SUPPLIES INCLUDING FERTILIZERS, PH ADJUSTMENT CHEMICALS, PH TEST KITS, MICRO & MACRO NUTRIENT TEST KITS • RESERVOIR HEATERS • BAT GUANO • WORM CASTINGS • MAXICROP SEAWEED CONCENTRATE • SOILLESS GROWING MEDIUMS • WHITE PLASTIC AND REFLECTIVE MYLAR SHEETING • PURGE ODOR NEUTRALIZER • OSCILLATING AND EXHAUST FANS • TIMERS • AND MUCH, MUCH MORE.

CALL OR WRITE TODAY FOR A FREE COPY OF OUR NEWEST CATALOG. YOU WILL FIND OUR SERVICE PROMPT AND OUR PRICES LOW! WE OFFER THE BEST GUARANTEE IN THE BUSINESS. MORE THAN JUST A NAME, WE ARE **SUPERIOR GROWERS**.

# SGS

## SUPERIOR GROWERS SUPPLY, INC.

4870 DAWN AVE.  
EAST LANSING, MI 48823

IN MICH. (517) 332-2663  
C.O.D.'S WELCOME

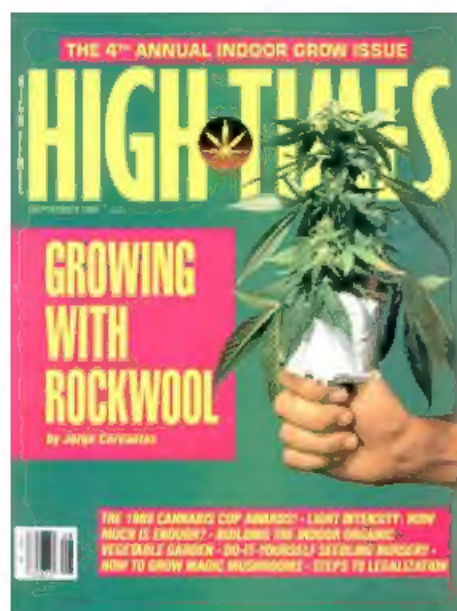
**TOLL FREE (800) 227-0027**  
MOST ORDERS FILLED IN 48 HOURS





# High Times

SEPTEMBER 1989



Reprinted from the High Times Archive

<https://archive.hightimes.com/issue/19890901/print>



©2023 - HIGH TIMES ARCHIVE. ALL RIGHTS RESERVED.